FDI, Ownership Change and the Firms' Business Performance in China

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Abstract

The thesis focuses on the firms' business performance in China, along with the growth of Foreign Direct Investment (FDI) inflows and the reforms of the institutions. This research employs New Institutional Economics (NIEs) as a theoretical basis, seeking to identify the mechanism of interaction between FDI, ownership change, and the institutions in China. The economic reforms, which started in the 1980s and continued thereafter, not only led to an unprecedented level of FDI inflow into China and increased the role of the private sector and ownership in the country, but also had more serious implications in that the formal and informal institutions of the Chinese economy remains largely under the control of the Chinese Communist Party. This study considers ownership change as an appropriate connection between FDI inflows, the improvement of business performance, and the institutions in the context of both formal and informal institutions in China. This paper aims to provide supporting evidence for the institutional approaches to the study of business performance in a transition environment. The author chooses the World Business Environment Survey (WBES) as the data source to explore the relations between the institutions and the business performances of enterprises in China, measured by sales and investment. In this thesis, the author uses a number of statistical tools, including descriptive analysis, Levene's test, Error Bar, Logistic regression, and categorical regression. The results show that the influences of the institutional constraints reported by the hypotheses vary in different occasions according to the firms studied, and these significant relations between the institutions and the business performance cannot be kept consistent and continuous. The influences of institutions on the business performance are complicated in China, measured by sales and investment. The complexity consists of the relation and interaction among the formal and informal institutional factors, of the relations between the institutional factors and the firms' inherent nature, and of the relations between the institutional factors and the firms' business performance in China.

Chapter 1 Introduction

1.1 Research background-----FDI, Institutions, and Economic growth in China

From the beginning of 1980s, China began reforming its economy, including application for membership in the General Agreement for Tariffs and Trade (GATT) (the World Trade Organisation (WTO) followed on January 1, 1995) (Norlan and Wang, 1999). In defiance of its previous objectives, the Chinese Communist Party that controls the government has allowed the appearance of some elements of a capitalist market, which has brought inevitable changes to the Chinese economy. China's WTO negotiation and membership played a key role in increasing the openness of its economy, including bilateral and multilateral trade, investment, and financial cooperation. Moreover, WTO membership "also means China's sensitive and infant sectors, and small and medium-sized enterprises …… are exposed to global competition and to conformity with WTO rules and disciplines" (Yue, 2004: 2).

In the 1980s, a number of developing countries initiated economic reforms in order to reform their economies and achieve high and sustainable economic growth. In the 1990s, the former Eastern European Communist countries, often referred to as transition economies, also joined this group of developing countries in reforming their economies. Although they all adopted similar development strategies and reform policies, some are still lacking behind, either in terms of the pace or quality of reforms. Some were even involved in serious economic and social crisis, such as the 1997 Southeast Asian crisis. The Chinese economic growth, on the other hand, is regarded as a miracle among them, and the firms' business performance is an important part contributing to Chinese economic growth. More importantly, the rapid business growth of firms' in China shows no signs of abating, despite apparent lack of what seems to be essentials for business growth in the western world, such as the rule of law and secure property rights (North, 1999). The obvious questions here are what China has done to improve its business performance? And how can China improve the performance of the firms?

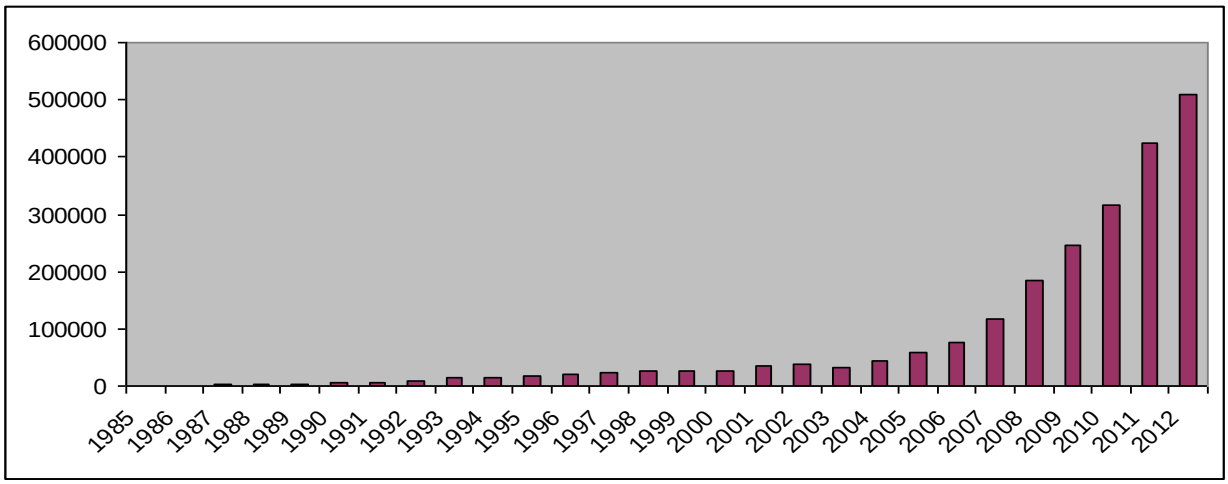
Since the 1980s, China has absorbed a large amount of FDI, and the FDI inflows to China increased from $ 19.56 million in 1985 to $ 1160.11 million in 2011 (table 1.1). From 1985 to 1991, the overall growth of the FDI inflows is more than doubled. In 1992 and 1993, the FDI inflows keep increasing at speed of about 150% per year. From 1994 to now, the growth of FDI inflows is stable except for the negative influences caused by Southeast Asian financial crisis in 1990s and the recent global economic crisis.

Table 1.1 The economic performance in China------FDI and GDP

	FDI	Annual growth	GDP	Annual growth
Unit	US$ 100M (current price)	%	US$ Billion (current price)	%
1985	19.56		305.26	
1986	22.44	14.72	295.48	-3.20
1987	23.14	3.12	321.39	8.77
1988	31.94	38.03	401.07	24.79
1989	33.93	6.23	449.10	11.98
1990	34.87	2.77	387.77	-13.66
1991	43.66	25.21	406.09	4.72
1992	110.08	152.13	483.05	18.95
1993	275.15	149.95	613.23	26.95
1994	337.67	22.72	559.23	-8.81
1995	375.21	11.12	727.95	30.17
1996	417.26	11.21	856.01	17.59
1997	452.57	8.46	952.65	11.29
1998	454.63	0.46	1019.48	7.02
1999	403.19	-11.31	1083.28	6.26
2000	407.15	0.98	1198.48	10.63
2001	468.78	15.14	1324.81	10.54
2002	527.43	12.51	1453.84	9.74
2003	535.05	1.44	1640.96	12.87
2004	606.30	13.31	1931.65	17.71
2005	603.25	-0.50	2256.92	16.84
2006	630.21	4.47	2712.92	20.20
2007	747.68	18.64	3494.24	28.80
2008	923.95	23.58	4519.95	29.35
2009	900.33	-2.56	4990.53	10.41
2010	1057.35	17.44	5930.39	18.83
2011	1160.11	9.72	7321.99	23.47

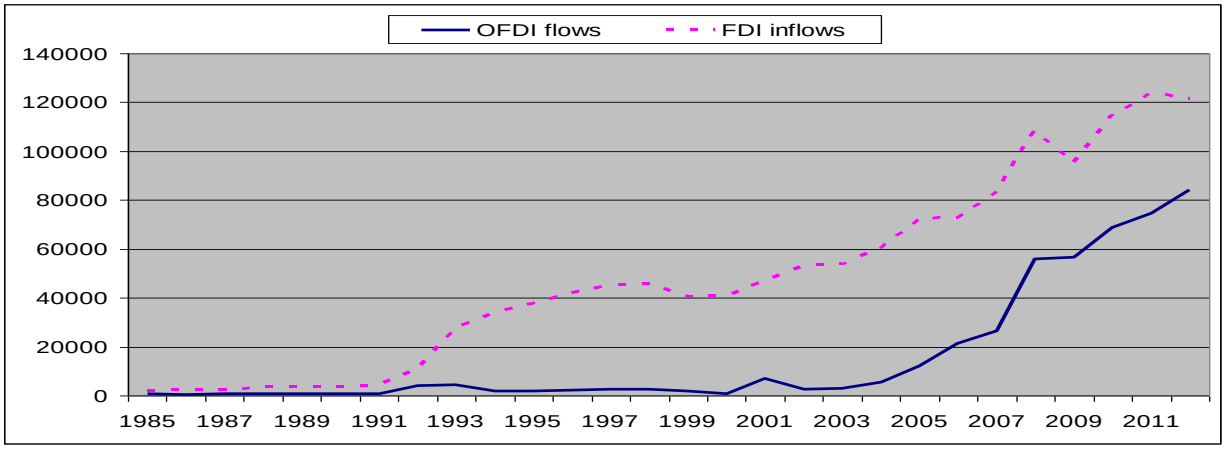
Source: FDI---Chinese statistical year book; GDP and GDP per capita---World Economic Outlook.

Graph 1.1 China's OFDI stock (US$ millions)



Source: UNCTAD

Grahp 1.2 China's OFDI flow and FDI inflow (US$ millions)



Source: UNCTAD

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One the other side, many Chinese enterprises already engaged in international business have started significant investment abroad while China remains a favourite destination of foreign capital at the same time (OECD, 2008). Shown in Graph 1.1 and Graph 1.2, at the end of 2012, China's cumulative stock of outward foreign direct investment (OFDI) reached USD 509 billion, more than 18 times the level in 2000. Although the amount of OFDI stock owned by China is still only about one quarter of the FDI stock in China, the OFDI flows from China during 2000-06 with an average flow of USD 7 billion per annum and an average annual growth rate of 116%, while at the same time, the FDI inflow to China only increased 54.8%.

Several studies suggest that the OFDI of China is to take advantage of beneficial host country conditions, and then re-invested in China to benefit from advantageous terms for foreign investors (Morck et al., 2008; Yeung and Lie, 2008; Cheng and Ma, 2008; Cheng and Stough, 2007). The OFDI of China are often also expected to make profits as the OFDI provides the investment incentives, such as the access to raw materials and energy, the acquisition of technology, brands and know-how, the search of new market, and the desire to avoid

international trade barriers (Salidjanova, 2011). In addition to profitable objectives, Chinese OFDI may also reflect different opportunities or incentives than FDI from other countries. In particular, China has a quite different institutional environment than the major source countries of FDI from the developed world, and the institutional setting in China may thus be an important determinant (Kolstad and Wiig, 2009). Alternatively, the China's OFDI may represent the establishment of holding companies for investment elsewhere, or attempts to hide wealth from tax authorities or other parties (Morck et al., 2008).

The Chinese companies that invest abroad were predominantly state-owned so far, for instance, 82% of China's non-financial outward FDI was conducted by state-owned enterprises in 2006 (Yeung and Liu, 2008). However, the 2011 Private Wealth Report, published by China Merchants Bank and business consulting firm Bain & Company, showed the number individuals in China, who have at least 10 million yuan ($1.53 million) worth of individual assets (financial assets, not including their primary residence) available for investment exceeded 500,000 in 2010, 19 percent more than in 2009. Moreover, among them, nearly 60 percent are either considering emigration through investment overseas or are already finalizing the process (Global Times, 2011). In fact, "Obtaining a US EB-5 visa (for immigrant investors) requires at least $500,000, or over 3.4 million yuan, the United States approved the settlement of 1,971 investment immigrants from the Chinese mainland in 2009, surpassing the entire number of 1,360 foreign immigrants who came to the US in the previous year" (Global Times, 2012).

Table 1.2 PERSONS OBTAINING LEGAL PERMANENT RESIDENT STATUS of the US BY REGION AND COUNTRY OF BIRTH

Year	1998	1999	2000	2001	2002	2003	2004
Total	653206	644787	841002	1058902	1,059,356	703,542	957,883
China	36854	32159	45585	56267	61,082	40,568	55,494

Year	2005	2006	2007	2008	2009	2010	2011
Total	1,122,257	1,266,129	1,052,415	1,107,126	1,130,818	1,042,625	1,062,040
China	69,933	87,307	76,655	80,271	64,238	70,863	87,016

Source: United States Census Bureau.

In addition, based on the statistical data released by the US government (table 1.2), in 2011, the US government granted green cards to more than 1.06 million immigrants. Among them, 87,000 were from China, 16,000 more than in 2010 (Chinadaily, 2010). An interesting question is what drives the Chinese domestic private capital to invest abroad, instead of staying in this rapid

growth economy, or what business obstacles they have to face in China. Moreover, why more and more FDI inflows to China while the Chinese private capital is moving away? In other words, what are the business constraints for the foreign capital and the domestic private capital in the business environment in China respectively, which results in their opposing reactions?

To study the business environment in China, some NIE researchers believe that FDI inflow influences the direction of China's growth and the kind of institutions support the business growth of firms in the country. Among them, North (2005) regards the effective performance as the essential requirement for the dynamic market as this performance entails the creation of open-access society. For them, the key is to create the appropriate institutions to provide the proper incentives under a particular business environment. Based on the NIEs, the institutional evolutions, such as the openness reforms in the 1980s, have encouraged FDI inflows in China. The change made by government to attract and absorb FDI brought some initial changes in this economy. Those in turn led to the construction of a set of beliefs, resulting in the evolutions of both formal including laws, regulations, contracts, constitutions, and networks, and informal institutions, such as social norms and values, privatization, corruption, cronyism, tax evasion, trust, social capital, new business ethics and informal cooperation (Leftwich, 2009; Chavance, 2008). The institutions in China have developed into an inter-dependent and multi-level system whose operation depends on organisational connections and personal relationships (Child and Tse, 2001). Finally, both formal and informal institutions worked together resulting in the creation of a new institutional framework. Thus, the institutional change for openness can be an issue to improve the business performance of the firms in China.

In this research, FDI inflows are used as a key factor behind initiating economic changes and institutions are examined as the vital element to sustain the changing policies and to improve the business performance of firms in general. However, these two issues do not guarantee a continuous business growth. In this respect, it is more important to study what else determines the success or failure of the changes in a developing or transition economy. The author seeks to study the connection between FDI and institutions, which results in the growth of business. This is to be achieved through investigating FDI inflows, the firms' business performance, and the application of institutional changes with the changes of the business environment in China.

1.2 The theoretical basis and research objective

The openness or liberalisation change in China means "that multi-layered approach should be appropriate for trading …… given its diversity and different levels of development…… to enhance the region's welfare if these arrangements create more trade" (Avila, 2002: 6-19). The other developing countries have pursued the export-oriented development strategies to increase potential competitive advantage and gain the benefits of their labour-intensive manufacturing processes. However, not all of them succeed in achieving their targets. Even worse, some have been involved in the economic crisis, such as the Latin American debt crisis in the early 1980s and the Southeast Asian financial crisis in 1997. As a result, these developing countries faced a number of problems, including sharp reductions in values of currencies, stock markets and other asset prices, and a reduction in incomes, stagnant economic growth, high unemployment and inflation (Weisbrot, 2007; Felix, 1990). Given the essential factors for economic growth, such as labour and capital (Solow, 1956), it can be questioned why those countries failed to achieve their growth targets. Therefore, it is important to clarify what results in these economic failures and what determine successful economic growth in a developing country.

Table 1.3 the institutional changes in the European post-Soviet countries

Periods	Formal rules	Enforcement of formal rules	Informal rules
Pre-revolutionary	Significant but partial changes in reforming countries*, limited change in others	Uneven, often decreasing	Fast and opportunistic changes in reforming countries, slow but real changes in others
Revolutionary	Radical, wide-ranging and extended systemic changes	Generally weak	Fast, opportunistic and protective changes and innovations (systemic uncertainty)
Post-revolutionary	Continuing changes, systemic (e.g. privatization) and intra-systemic (driven by complementarity)	Consolidation, uneven depending on domains considered	Opportunistic change, learning processes in stabilizing formal framework (intra-systemic uncertainty)
Evolutionary	Incremental changes, intra-systemic	Consolidation, routinization	Changes principally through learning processes, gradual innovations

Source: Chavance (2008)

Moreover, the post-socialist transformation in approximately 30 countries during the 1990s and 2000s has also led to a number of new topics for social researchers. Among these studies, two typical aspects of transformation are the striking diversity of national paths of change and the general importance of informal relations and rules in a process of rationalization and formalization. Chavance (2008) summarised these changes in Europe and in Asia respectively (table 1.3 and table 1.4), and concluded that the specific and evolving relations between formal

and informal institutional change have been a key element in the transformation of these post-Soviet countries. Although a number of scholars examined these changes at a national level (Chavance and Magnin 1997; Magnin, 1999; Van de Mortel 2002; Lane and Myant, 2007), the investigation of the formal and informal institutional changes that directly influenced the business operation of firms should be also emphasised. Concentrating on such causes and the processes of institutional changes that affect business performance may help to understand the application of the NIE theories. In this thesis, the author intends to apply the NIE theories to investigate the relations between the firms' business performance and the institutions at an organisational level in a Soviet country, in order to better understand the efforts and the changes related in this transitional process.

Table 1.4 the institutional changes in the Asian post-Soviet countries

Periods	Formal rules	Enforcement of (existing or new) formal rules	Informal rules
Relaxing socialist institutions	Limited, experimental change in formal rules, followed by formalization of actually transformed relations	Uneven, often decreasing	Fast changes following initiatives of local actors
Dual-track reforms	Changes intended at controlling a piecemeal reduction of the state sector and extension of a non-state sector	Generally weak	Fast, opportunistic changes and innovations (speculation on prices, profiteering in relaxed foreign relations)
Radical institutional reforms	Changes intended to reduce and transform basic socialist institutions	Consolidation, uneven depending on domains considered; relative hardening of budget constraint	Opportunistic changes, learning processes in persistently changing formal framework
Postsocialist capitalist evolution	Extension of formal capitalist institutions	Consolidation, uneven depending on domains considered, elements of routinization	Changes through learning processes, gradual or swift innovations

Source: Chavance (2008)

Accordingly, there are several reasons as to why the author chooses China as the research target country. China is the biggest developing country and the biggest transition economy in the world. Moreover, since the beginning of the 1980s, China has overcome the same difficulties faced by other developing and transitioning countries while achieving and maintaining a relative rapid economic growth. In this regard, as a country that has achieved high economic growth over the past thirty years, it is useful to examine how and why China has succeeded while others have failed. Among the factors that support economic growth, the improvement of the firms' business performance should be one of the fundamental issues contributing to China's economic success. "China's success is built on the gradual liberalization of product and labour markets,

increasing openness to foreign trade, investment in infrastructure and institutional changes such as property reforms and privatization which provide individual actors with sufficient security for planning, investing and economic risk taking. The beneficial effect of the state results from its capacity to construct and maintain institutional environments that provide positive incentives to entrepreneurs and managers at the firm level to invest in economic growth" (Nee et al., 2007: 43-44). Therefore, the issues that comprises the institutions, the economic changes, and the governance systems work together to constitute the Chinese business environment. It is consequently necessary to study these issues in order to enhance our understandings of the impact on business performance or the practical outcomes of the economic changes in China. To examine the firms' business performance during the changing process in China, this thesis focuses on the following research questions:

- Can a relationship between institutional frameworks and the business performance of firms be conceptually defined?
- Can this relationship be tested in the case of the business performance of firms in China in the context of FDI inflows and the policies related?
- Can any relationship between the institutional constraints and the different firm categories be found, including the firms with / without foreign ownership, as well as the private firms and the non-private firms?

The NIE will be employed as a theoretical basis for this research. According to new institutional economists, institutions consisting of formal rules, informal constraints, and their enforcement characteristics, constrain the behaviour of individuals to maximise the wealth or utility of principals (North, 1981; Harberger, 1978; Scully, 1988). Both formal and informal institutions determine the transaction cost and productivity and quality of transactions, with the institutions, as a result, shaping the direction of economic change (North, 1991). This research concentrates on the factors that directly influence the firms' business performance in the context of sales and investment, as the effects of a changing business environment under the economic and social changes to achieve the economic growth in China.

A number of factors such as the SOEs and the socialist business environment in China, and governmental intervention in the business operation in particular, have been widely criticised because of their inefficiencies and ineffectiveness. They are also considered as obstacles to the improvement of business performance, which may prevent sustainable economic growth in the future (Child, 1994; Li et al., 2006; Ma et al., 2006; Pan et al., 2008; Peng, 2004; Shenkar and

Von Glinow, 1994; Wei, 2007). The objective of this paper is thus to identify the mechanism between the firms' business performance and institutions in China. In the proposed study, the author will investigate how institutional changes affect FDI inflows and improve business performance in China, including the relevant changes in the formal institutions and the informal institutions. In particular, this research proposes to find a key to enhance business performance in China, and then to use this key factor to understand the relations between the institutional changes caused by FDI inflows and the domestic business impacts related to the FDI favourite changes in addition to the proposed aims and the practical influences of the changing efforts in China. To sum up, the author aims to provide a strategic implication of improving the firms' business performance in developing and transition economies.

1.3 Research approach

In order to answer the question about how institutions may affect the business performance of firms along with the FDI inflows in China, the author focuses on studying the causal relationships between the institutional variables and the firms' business performance. The author conducts this study through the following steps. In the beginning, the author introduces the conceptual framework to investigate the business performance of the firms, along with the economic changes and the related social changes in China. This framework focuses on domestic changes, including those which have led to institutional changes. Consequently, the influences on the firms' business behaviours should be measured in the context of the institutional changes. The study will then focus on formulating and testing the research hypothesis about the relationship between the firms' business performance and the business constraints, which may consist of both formal and informal institutions in China.

This thesis consists of two main parts. The first part --- from chapter 1 to 5 --- provides an overview of the theory of institutional economics, highlighting its most important three aspects. It also reviews the relations between FDI inflows, the institutions, and the emergence of private ownership in China. The first part highlights the importance of the appearance of private ownership in China during the economic growth path, and looks at the value of private ownership to achieve sustainable growth and development along with the changing policies. Based on the reviews of the existing literature, the author draws attention to the conceptual framework to answer the research questions and to accomplish the research objectives. Furthermore, the author examines the methodology and research that will be used to test the research hypotheses from the conceptual framework.

The second part ---from chapter 6 to chapter 9--- covers the empirical analysis and discussions of the research. Chapter 6 studies the research hypothesis in general. Chapter 7 investigates the research hypotheses about whether the intensity of institutional constraints differs across the different categories constituting the ownership structure of the firms in China, i.e. between firms with and without foreign ownership; between private firms and non-private firms; and between small, medium and large size firms. Chapter 8 empirically examines the relationship between the institutions and the firms' business performance. Using the regression model, this chapter examines the nature of the interaction between institutions and the effect of institutions on the business performance in China. In chapter 9, the author summarises the research findings of chapter 6, chapter 7 and chapter 8 to further discuss the reasons behind the mathematical results regarding business performance and institutions in China, including the practical influences of the changes on business operation. The final chapter of research is the conclusion which highlights the main points and findings of this research. This involves the implications of the findings as well as the limitations of this study and recommendations for further research.

Chapter 2 Institutional Economics

2.1 Introduction

This chapter introduces the theoretical foundation of this dissertation, which is based on the New Institutional Economic theory. There are six sections in this chapter. The first section reviews the definition of institutions and the origins of the New Institutional Economics (NIE). The second section presents three categories of institutions and explains why this research uses the NIE to investigate the firms' business performance in China. The third section displays the important elements of the NIE, while the fourth section discusses the importance of the link between institutions and the process of economic change. In the fifth and sixth sections, I will be discussing the business performance and the economic exchanges of informal and formal institutions.

2.2 Definition of institutions and the new institutional economics

The term "institutional economics" can be traced back to Walton Hamilton in 1918. Commons (1931), one of the founders of the NIE theory, states that an institution is a collective action that is used in the control, liberation and expansion of individual action. Veblen (1898), Commons (1931) and Coase (1937), characterised the beliefs of Original Institutional Economics (OIE) in that this view of institutions was typical of their viewpoint on institutions. Commons (1931, cited by Rutherford, 1983), saw this as,

> "(1) the nature and function of property rights and other rules and their effect on economic transactions, (2) the behaviour of private collectives and judicial and political processes of decision making, (3) institutional change, and (4) proposals for institutional reform." (Rutherford, 1983:739)

However, Rutherford (1983) noted that the issues of transaction costs, public goods, externalities, free ridership, and bureaucratic behaviour are omitted from Commons' view, which is something that could have been used to strengthen his definition on institutions.

Hodgson (2000: 318) described and summarised the core of the OIE, in terms of five propositions:

- Although institutional economists are keen to give their theories practical relevance, institutionalism itself is not defined in terms of any policy proposals.

- Institutionalism makes extensive use of ideas and data from other disciplines such as psychology, sociology and anthropology in order to develop a richer analysis of institutions and of human behaviour.
- Institutions are the key elements of any economy, and thus a major task for economists is to study institutions and the process of institutional conservation, innovation and change.
- The economy is an open and evolving system, situated in a natural environment, affected by technological changes, and embedded in a broader set of social, cultural, political, and power relationships.
- The notion of individual agents as utility-maximising is regarded as inadequate or erroneous. Institutionalism does not take the individual as given. Individuals are affected by their institutional and cultural situations. Hence individuals do not simply (intentionally or unintentionally) create institutions. Through reconstitutive downward causation institutions affect individuals in fundamental ways".

Hodgson also considered the fifth proposition as the single most important characteristics of the old institutionalism, and that is also the difference between the OIE and the NIE. Mayhew (2000) agreed with Hodgson about the identification of "five propositions" as the main defining features of the OIE. For them, the difference between the OIE and the NIE is that the NIE aims to explain institutions "with the tools of neoclassical theory, so that institutions are chosen by individuals and not allowed to condition individual choice" (Dequech, 2002: 566). In other words, given an environment, the individuals are constrained by the institutions providing incentives for individuals.

Williamson (1981) and North (1990) lead the NIE. North (1995: 8) has defined institutions as "the humanly devised constraints that structure human interaction--the 'rules of the game.' The definition is designed to be complementary to the choice-theoretic framework of economic theory and to incorporate the overall function of institutions--which is to provide the underlying structure to exchange and human organization". Both schools of traditional institutional economics and the NIE reject the assumption pioneered by the neo-classical economics, that the full economic rationality postulate or perfect foresight (Richter, 1996). North (1994), in particular, criticises neoclassical theory for not being an appropriate tool to analyze and prescribe policies that will induce development as it is concerned with the operation of markets, instead of how markets develop. Both the OIE and NIE theories use institutions as the basis of

their analysis, linking institutions and economic performance together. They also believe institutions determine economic activity and hence contribute to economic growth.

North (1990 and 1991) explains the economic phenomenon in terms of mainstream economic orientations, by including the institutions in the analysis of economic issues and abandons the neoclassical assumption of economic rationality and zero transaction costs. In other words, NIE places more emphasis on choices to be made and explain individual's behaviour in complex, dynamic circumstances that involve a great deal of uncertainty, in contrast to the concept of rationality in the neoclassical economics. NIE retains the economic assumptions of scarcity and competition. The scholars of NIE believe that transactions are not costless (Coase, 1937), and due to the incompleteness of information, this outlines the importance of the institutions in reducing uncertainty in human exchange, and therefore as a determinant of the efficiency of markets. As a result, the NIE researchers implement transaction cost to their analysis.

It is important to note that rules not only differ between various societies, but that they might also differ from one individual to another, from one group to another and from one society to another. These differences are the result of societal changes, including different natural endowment and different subjective backgrounds. The evolutionary path is determined by past and initial conditions (North, 1990). Moreover, these rules do not have to be under the control of certain characteristics of an institution. Rules differ in their degree and extent of change. Indeed, as an example, formally written rules could be changed at any moment of time provided that the incentive (such as technology and prices) for that change exists. However, rules, based on cultural endowments, change very slowly and incrementally throughout time. This may hinder any process or changes that a given society or a nation wants to undertake (North, 1990, 1991 and 2003).

This research is based on the results of the NIE in investigating the links between institutions and firm performance in China. The NIE focuses on the importance of institutional frameworks in determining the business performance in terms of the efficiency of market based interactions. This performance is strongly affected by transactions and coordination costs, and is determined by the characteristics of informal and formal institutions and the way they interact (Welter, 2002). Consequently, the NIE provides an analytical framework that is useful for investigating the central issues in this research. These issues are the relationship between institutional frameworks and the performance of firms in the context of marketing programmes in a

developing country. Moreover, the application of the NIE focuses on the interaction between different institutional constraints and examines how this may affect business transactions. Therefore, the NIE provides a useful instrument for studying the interaction between the institutions and the performance of firms in China.

2.3 The NIE and institutional categories

The NIE defines institutions as socially constructed constraints that structure human interaction. Institutions consist of formal rules (new property rights laws, judicial system, privatisation and deregulation), informal constraints (values, norms, beliefs and culture), and their enforcement characteristics (North, 1991). Together they define the incentive structure of societies and specifically economic transactions (North, 1994). Clague (1997: 2) has defined institutions as the "rules of the game". He also adds, "The emergence and evolution of these rules is understood in terms of the motivations and decisions of the individual actors in the collectivity".

Institutions help create order and reduce uncertainties in human interaction and human exchange, as they are the devised constraints that structure the human environment. When transaction cost is considered as a determinant of economic performance, institutions and the technology employed determine the cost of transacting and producing. As an on-going process, economic growth could be a consequence of the choices made by individuals and organisations (North, 1992). Among economists, Knack (2002) considers technical change as an important mediating channel through which institutions affect economic growth, while many scholars argue that political institutions are the key precondition of development (Easterly, 2001). North and Thomas (1973), Jones (1982) and North (1981) believe that the protection of property rights inhibits investment, which is the proximate determinant of economic growth. Apart from these arguments, institutions are considered as a fundamental determinant of economic growth. According to the NIE, institutions can be defined as a set of rules, both formal and informal, which govern the behaviour of society or of individuals in the conduct of human interactions and serve to enforce decisions. The ways in which these rules interact determines how incentives are given in an economy and has consequences for its performance. This definition is maintained in this research as it emphasises the importance of both informal and formal institutions, and how the interaction of formal and informal rules determine the nature of incentive and enforcement mechanisms.

Institutions can also be considered as social structures that have attained a high degree of resilience as individual and organisational activities are strongly shaped by a given institutional environment which influences their actions (Scott, 1995). Institutions are composed of cultural-cognitive, normative, and regulative elements that provide stability and meaning to social life, activities and resources. The three elements collectively comprise the institutional mechanisms within an economy (Bruton et al., 2002). Moreover, it is possible for one class of institutions to replace the failed institutions of another class (Aoki, 2001). The relative influence and importance of these institutions are dependent on the nature and development of the economy.

Regulatory institutions represent laws and sanctions that guide and regulate the behaviour of firms and individuals (North, 1990). Regulatory processes involve the setting of rules and their subsequent enforcement to regulate individual and organizational action through formal or informal methods (Scott, 1995). Normative institutions define the roles and actions expected of individuals and firms. These norms can hold very significant guides and values, such as understandings of the role of a Capitalist, what values he or she should hold, and how behaviour is conducted. Cognitive institutions are most closely associated with culture in that they are created and carried out in a specific country, including informal constraints in traditions, such as conventions that are taken for granted and subconsciously accepted rules or customs (Jepperson, 1991; Scott, 2002). Cognitive institutions develop over time and shape the views as to what actions are appropriate. As a result, certain actions can affect investment in a region (Bruton et al., 2001), including expectations of trust and reliability, the importance of non-contractual relationships and connections, regard for government and public sector priorities, and expectations of government support.

2.4 Three core elements of New Institutional Economics

2.4.1 Transactions Cost

As Williamson (1981: 555) stated, "The critical dimensions for describing transactions are uncertainty, the frequency with which transactions recur, and the degree to which durable, transaction-specific investments are required to realize least cost supply". NIE emphasises the fact that transactions are not costless and their costs are increasing with the frequency of transactions, the specificity of the assets involved, and the uncertainty connected to human interaction (Williamson, 1985). One of the main reasons why transaction costs create market imperfections which ultimately lead to market failure is due to the cost of acquiring and processing information. Transaction costs actually make markets differ greatly from a perfect

model (North, 1993a). Consequently, the importance of the demand for institutions appears to correct these imperfections.

The transaction cost approach regards the transaction as the foundation of the NIE research. The theory of transaction costs implies that transaction costs tend to be minimised, and such reforms have to be considered in order to implement transaction cost-minimising methods in response to a changing, competitive environment (Buckley and Chapman, 1997). Accordingly, the investigation of transaction costs is at the centre of the NIE analysis of the efficiencies and inefficiencies of market based transactions in different institutional contexts. Therefore, the NIE emphasise that institutions and transaction costs influence transformation costs. Furthermore, the study of transaction costs provides a useful approach of analysing advertising, marketing and policy making (Samuels, 1995). In addition to efforts to reducing transaction costs, contracts between firms have the advantage that the two parties can be risk-neutral in order to deal with each other fairly. For many transactions however, either market procurement or own-production is technologically feasible and the choice is predominantly decided by comparative transaction cost considerations, subject to comparisons between the cost and competencies of alternative modes of governance (Williamson, 1998).

The scholars' consideration on the transaction costs result in the theoretical arguments at different levels. Coase and Williamson explore the conditions under which firms or organisations in the private and public sector could reduce transaction costs. As Coase (1995: 245) noted, "The costs of coordination within a firm and the level of transaction costs that it faces are affected by its ability to purchase inputs from other firms, and their ability to supply these inputs depends in part on their costs of coordination and the level of transaction costs that they face which are similarly affected by what these are in still other firms. What we are dealing with is a complex interrelated structure". Additionally, he states, "Add to this the influence of the laws, of the social system, and of the culture, as well as the effects of technological changes such as the digital revolution with its dramatic fall in information costs (a major component of transaction costs), and you have a complicated set of interrelationships the nature of which will take much dedicated work over a long period to discover. But when this is done, all of economics will have become what we now call the NIE" (Coase, 1998:73).

North and others consider institutions generally at the macro level, and their effect in minimising or increasing transactions costs, such as the strength of property rights, laws and

customs (North, 1990, 1991, 1999). North (1993: 160) also points out, "Transaction costs are those costs involved in measuring what is being exchanged and in enforcing agreements. In economic markets what are measured are the valuable attributes of goods and services or of the performance of agents; enforcement consists of costs associated with measuring and enforcing the terms of exchange. Measurement consists of the physical and property right dimensions to goods and services or the performance of agents. The physical dimensions have objective characteristics and the property rights dimensions are defined in legal terms. Competition plays a critical role in reducing enforcement costs. Yet economic markets throughout history and in the present world are frequently very imperfect, beset by high transaction costs and defined by institutions that thwart economic efficiency. In fact the fundamental issue in developing productive economies is the creation of institutions that provide low costs of transacting".

2.4.2 Principal-Agent theory

Principal-Agent (PA) theory is an important subject for many business researchers because it allows the analysis of the management performance of an entity (in either business or political and public area) at a macro or micro level, assessing the relationship between the principal (e.g. shareholders, legislatures) and the agent (e.g. managers, bureaucrats). The theory offers unique insight into information systems, outcome uncertainty, incentives, and risk (Eisenhardt, 1989). This characteristic has made the theory very popular amongst different scholars from many fields of business researches, including accounting economics finance, and organisational behaviour.

PA relations are the relations between actors in which one actor named the principal, transfers resources to other actors called the agents, "which they should use to realize the objectives of the principal which the principal himself cannot realize" (Meulen, 1998:399). As the principal retains the right to monitor the transfer of resources (Coleman, 1990), PA theory has been used to explain and conceptualize the translation of policy in the relations between the government and its dedicated agencies (Moe, 1984). PA relations are characterized by four important features (Meulen, 1998:399). First, agents have their own objectives and interests that might be in favour or against those of the principal. That is often a main reason for an agent to enter into the PA relation as the resources of the principal can be used to satisfy the objectives and interests of the agent. Second, the principal is short of the relevant capability to make a proper judgement about how to realize its objectives and often depends on the information provided by the agents. Thus, the information asymmetry between the principal and agent is a main problem

for the principal. Third, although the principal has the right to monitor when the resources are transferred to the agent, monitoring behaviours themselves bring additional costs and self-reporting by the agents, which are unreliable without further incentives. In other words, as he lacks appropriate information on the activities of the agents, the principal has to introduce more evaluations and other evaluative criteria that will lead to increasing costs to monitor the agents, including user-judgments, productivity and network relations (Meulen, 1995). Finally, the principal should also trust the agent to create stability and continuity, especially in long-standing principal-agent relations (Shapiro, 1987). Based on the four characteristics of PA relations, an incentive structure is used to attract agents which match the interests and objectives of the principal.

North (1992: 1-2) notes that, "In fact, we have incomplete information and limited mental capacity by which to process information. Human beings, in consequence, impose constraints on human interaction in order to structure exchange. There is no implication that the consequent institutions are efficient. … Individuals possess mental models to interpret the world around them. These are in part culturally derived--that is produced by the intergenerational transfer of knowledge, values, and norms which vary radically among different ethnic groups and societies. In part they are acquired through experience which is 'local' to the particular environment and therefore also varies widely with different environments. … Individuals make choices on the basis of their mental models. Individuals do learn, and changes in mental models stem from outcomes inconsistent with expectations …… The incomplete information and limited mental capacity by which to process information determines the cost of transacting which underlies the formation of institutions. At issue is not only the rationality postulate but the specific characteristics of transacting that prevent the actors from achieving the joint maximization result of the zero transaction cost model. The costs of transacting arise because information is costly held by the parties. The costs of measuring the multiple valuable dimensions of the goods or services exchanged or of the performance of agents, and the costs of enforcing agreements determine transaction costs."

Dean and Andreyeva (2001) mention two approaches to protect the principals against expropriation by the agents. These are the legal protection of the investor and the concentration of ownership. With the investors' legal protection, the principals have legal power to be able to enforce their returns. In the second approach, large shareholders can match their control rights connected with their investment (Shleifer and Vishny 1997). The application of PA theory

usually depends on the format of contract, whose impacts are connected with the distribution of income and the benefits from participation. The participants' benefits depend on the terms of the contract and their own characteristics, through the procedure of pursuing their respective strategies. Basically, a contract scheme is able to strengthen income stratification to influence the involvement of participation, and the transactions costs and information costs in the market environment work together to affect the process of business operation (Warning and Soo Hoo, 2000). In other word, PA theory is used in NIE to focus on information imperfections and information asymmetries, especially how opportunistic agents can confound their principals because of unequal access to information (Stiglitz, 2001; Williamson, 1985). PA analysis, thus, contributes to an understanding of the "deficiencies" of the organisational set-up in a particular institutional setting and provides guidance on corrective strategies. For example, PA approach is relevant to the study of corruption in the bureaucracy, to the extent that principals do not endorse or encourage this behaviour. Consequently, measures such as organic reorganisation of a given structure could be taken by the regulator so that the interests of the multiple parties do not diverge at the expense of other parties. Hence, more accountability, more transparency and more equity are established.

The separation of ownership and management means that the agency problem exists as long as investors and managers are not the same people. It refers to the behaviours of the managers to use the firm's resources for personal gains at the expense of investors' interest, by taking the advantage of their expertise and access to inside information of the enterprises (Jensen and Meckling, 1976; Shleifer and Vishny, 1997). In sum, PA is a useful instrument that highlights how well a given institutional system is functioning. It helps to understand the advantages and disadvantages of institutional systems through the relationship built between principals (such as shareholders) and agents (such as managers).

2.4.3 Property right

Economists agree that good economic institutions must secure property rights, enabling people to keep the returns on their investment, make contracts, and resolve disputes. By encouraging the investment in human capital and in physical capital, the security of property rights boosts economic growth. The system related to property rights, including contract enforcement, is principally important in reducing the transaction costs of doing business and thus enabling markets to achieve economic efficiency. In market-based transactions fundamental problems arise where there is ability to hold, benefit from, and transfer resources, and no ability to enforce

agreements. In these conditions economic actors risk substantial losses if they engage in market transactions. According to Demstez (1967) property rights derive their significance from the fact that they help form those expectations which can reasonably be held in dealings with others. These expectations find expression in the laws, customs and mores of a society. In the view of Demstez, it is the value of the bundle of rights attached to the property that determines the value of what is exchanged not the commodity itself. North (1990: 54) asserts that "the inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in the Third World…" because the absence of secure property rights discourages investment and specialization.

Property rights constitute an important element for countries experiencing economic change that involves transformation modes of transactions among economic agents. Coase (1937 and 1960) made the fundamental connection between institutions, transaction costs and neo-classical theory. Because a large part of our national income is devoted to transactions, institutions and specifically property rights are crucial determinants of the efficiency of markets. Clear definition, attribution and protection of property rights during the phase of transformation directly affect the way investment is undertaken and its performance (Knack and Keefer, 1995; North 1990, 1994; Clague, 1997). One person's ownership can be categorised with the absence of ownership and control by another. Property rights identify relations among people, which means that they characterize "the institutional basis of the power relations in the processes of production, exchange, and accumulation" (Campbell and Lindberg, 1990: 642). It is of great importance to comprehend the importance of the structure of property rights, as any modification in the property right bundles (e.g. private or public possession and exchange) leads to a reallocation of resources and hence may result in an increase in the transaction cost of engaging in market-based transactions (Alchian and Demsetz, 1973). Therefore, the heart of efficient business operation must be linked to the creation of policies in order to create and enforce efficient property rights (North et al., 2000). That is to say, in the case of economic institutions--property rights, the fair enforcement through a judiciary and other governmental agencies can create credible commitment for institutions.

Two central dangers in society are disorder and dictatorship. As Djankov et al. (2003: 598) noted, "Disorder refers to the risk to individuals and their property of private expropriation in such forms as banditry, murder, theft, violation of agreements, torts, or monopoly pricing. Disorder is also reflected in the private subversion of public institutions, such as courts, through

bribes and threats, which allows private violators to escape penalties. Dictatorship refers to the risk to individuals and their property of expropriation by the state and its agents in such forms as murder, taxation, or violation of property. Dictatorship is also reflected in expropriation through, rather than just by, the state, such as occurs when state regulators help firms to restrict competitive entry".

Property rights are centrally important for the allocation and use of resources, as they settle legally or institutionally possibilities in the form of contracts. In order to enhance efficiency of market operation, institutions function to support private contracting and ensure the enforcement of property rights, to reduce asymmetrical information and other otherwise external effects (Rametsteiner, 2002). There are two sides to securing property rights. On the demand side, investment must be secured by the government. On the supply side, a government is capable of protecting property against expropriation. These demands reflect a trade-off of institutions. That is, the goal of controlling disorder that is toward greater dictatorship on the one hand, and the objective of controlling state intervention that is against dictatorship on the other hand. Accordingly, a fundamental problem of institutions is the conflict between the goals of controlling disorder and dictatorship (Djankov et al., 2003).

The state can have an effect on property rights in several ways, "as an actor who assists or leads the selection process, as a political-institutional structure that constrains and establishes the range of available governance options, and as an actor who ratifies (or not) emergent governance regimes" (Campbell and Lindberg, 1990: 642). It is also important to understand the mechanism by which some economies have a strong enforcement capacity while others do not. Although contract compliance is a function of clear laws and courts, many transactions are carried out without explicit compulsions by outside enforcement agencies (Clague, et al, 1997). Businesses routinely go to considerable lengths to keep disagreement out of the courts, which are seen as a relatively cumbersome instrument for resolving complex disputes (Macaulay, 1963; Williamson, 1985; Clague, et al, 1997). An institutional analysis provides a good momentum to examine thoroughly the conditions under which such compliances thrive, thereby delivering low transaction costs and efficient market based exchange.

2.5 Institutions and economic change process

Institutional economics uses an evolutionary analysis of economic phenomenon in order to understand the environment in which individuals, organisations and nations perform. Making

economic changes should fit in an understanding of institutions and the incentives facing individual actors. The intended and actual outcomes may differ in response to creating the right social and political environment. Under a new institutional equilibrium, individual actors understand the incentives set, to undertake and respect a given change (Clague, 1997). North (1994: 359) notes, "A theory of economic dynamics is also crucial for the field of economic development …although he cannot guarantee that the beliefs and institutions that evolve through time will definitely produce economic growth". The complexity of environment increases as human beings become increasingly interdependent. This means that it becomes necessary to introduce some complex institutional structures to capture the potential gains from trade. Originally, institutions allowed anonymous, impersonal exchange across time and space (North, 1993). For the NIE scholars, culture provides the key to path dependence. In this regard, the past is a powerful influence on the present and future. Throughout time, collective learning is "the transmission in time of our accumulated stock of knowledge" (Hayek, 1960: 27), which consists of the experiences that are embodied in our language, institutions, technology, and ways of doing things. More importantly, the belief systems and institutions of the experience of a society might fail to meet and solve new problems arising along with societal complexity.

There are four basic institutional strategies for the enforcement of good conduct in a society (Djankov et al., 2003: 601): "

- ✧ The market discipline solution relies on the incentives of issuers themselves, or of their underwriters, to disclose the truth about the securities because they need to establish a reputation for credibility to raise funds in the future.
- ✧ The society can rely on private suits by buyers of securities who feel that they have been cheated by the issuers, under the general doctrines of contract or tort. For this, the society needs a court and a judge. The question for the court is whether the issuer disclosed inaccurate information or failed to disclose material information.
- ✧ The society can designate a public regulatory agency, which mandates what should be disclosed by security issuers, inspects their books and disclosures, and penalizes issuers and underwriters who break its rules. Between private litigation and full-scale regulation, the regulator can establish the rules for security issuance, but leave the enforcement of these rules to private litigation by the wronged investors.
- ✧ The society can nationalize security issuance. A company wishing to raise capital must relinquish the inspection, disclosure, and sale of securities to the state".

"These four basic strategies differ in the degree of public control. No public involvement is required with competition and private orderings. Courts employ impartial judges enforcing the rules of good behaviour. These rules do not even need to come from legislation; rather, they may derive from custom or from judge-made common law. Even in this case, the judge is a public agent with decision-making authority. With regulators, the state writes the rules, inspects the product before it is sold, and penalizes sellers for delivering a bad product. Both the scope of government activity and its centralization are increased relative to independent courts. Finally, with state ownership, the government takes complete control over an activity" (Djankov et al., 2003: 601).

Agents acquire certain behavioural patterns and attitudes arising from their interaction with each other within an economic setting. These informal institutions play a significant role in the manner by which formal institutional constraints operate and influence the transaction costs in market transactions. The nature of informal institutional factors means that informal institutions affect market based transactions which change very slowly with uncertainty. This makes the process of economic change very complex, resulting in unexpected and uncertain outcomes. Differing from formal rules, informal institutions have possibly developed before the economic change process starts. This would lead to incompatibility between the formal and informal institutions. Moreover, the enforcement of the rules could not be effective in such environment as there is a gap between what formal rules state and what informal rules accept, and the resulted outcome would be consequently inefficient. North (1990: 45) illustrated this fact, "….equally important is the fact that the informal constraints that are culturally derived will not change immediately in reaction to changes in the formal rules. As a result the tension between altered formal rules and the persisting informal constraints produces outcomes that have important implications for the way economies change".

Overall, with a critical review of the economic development, we have to incorporate past experiences into the analysis, with full awareness of the current interests of the participants in the economic changing process. North (1990: 7) argued that inefficient institutions could keep unchanged if they have the necessary support, as "rulers devised property rights in their own interests and transaction costs resulted in typically inefficient property rights prevailing". In the context of incorporating past experiences into the analysis of change, it is important to realise the powerful influence of the past on the present and future, which is known as path dependence. In its most general meaning, path dependence is the condition where outcomes are

sensitive to the variations in events that lead to that outcome (Liebowitz, and Margolis, 1995). Path dependence exists when the present state of a system is constrained and directed by its history. The basic advantage of path dependence is that it gives systems stability and structure as it plays a role of stability in case of undesirable shocks. However its basic disadvantage is that it may get in the way of necessary or desirable change.

Meanwhile, the NIE researchers choose an institutional/cognitive approach for the better understanding of developments (North, 1994). Creation of institutions which allow low-cost transacting in favour of cooperation in impersonal exchange is complex, because it not only entails the creation of economic institutions, but also requires the connection with appropriate political institutions. The NIE scholars use institutional/cognitive analysis to explain path dependence, and address the difficulty of understanding economic change process as a function of political markets. This places the belief systems of the agents at the centre (Arthur, 1989; Paul David, 1985). Moreover, this integrated institutional/cognitive approach explains the complex interplay between institutions, technology, and demography in the overall process of economic change (Rosenberg, 1976; Mokyr, 1990; North, 1994).

As a result, by using the institutional/cognitive approach, analysts and policy makers must recognise the constraints that contribute to the path-dependence situation, to understand their nature and try to proceed. However, this depends mainly on how soon society (or an individual actor) is able to adapt to new formal and informal institutions. North (1999) names this ability as the adaptive efficiency of institutional environment, which is determined partly by how the informal and formal institutions interact within a given social environment.

2.6 Interaction between informal and formal institutions

The study of institutions requires a deep understanding of the complexity of the elements in the institutional framework and the interaction between the informal and formal institutions. Accordingly, it is necessary to realise the functioning of the institutions and their key roles in determining the policy outcomes. Hare (2001:5-6) summarises a number of special features related to the institutions of economic development: "(a) they regulate economic behaviour in ways which, in the short run, often conflict with individual preferences; (b) they are based on shared expectations, derived from custom, trust, legal provisions, etc.; (c) they make most sense if the economy is thought of as a "repeated game" in which most types of transaction occur many times; and (d) anonymity, in the sense that the functioning of a given institution should

not be dependent upon the identity of the economic agents seeking to conduct the types of transaction to which this institution relates".

Policies normally belong to formal institutions, but outcomes are a result of changes in both formal and informal institutions, as well as enforcement characteristics. Therefore, assessing the interaction between formal and informal institutions becomes essential to improve economic performance (Mantzavinos, et al, 2004). The emphasis on the interaction between formal and informal constraints is based upon the fact that the exchanges governed by a set of formal institutions (contracts, incentives, authority) and informal institutions (norms, routines, political processes) are deeply intertwined. Hence, the failure to integrate these concepts into a common theory has led to faulty reasoning and incomplete theories of economic organizations (Zenger, et al, 2002).

Li (2004) studies the institutional framework for the protection of the property rights in China, and shows the imbalance between formal rules and informal constraints. He concluded that foreign firms have to understand the important relations in the institutional matrix in order to achieve long term protection of property rights. In addition, he noted that informal institutions cannot lead to any improvement of businesses protection in the long term and leads to delays in the establishment of formal institutions for property protection. Nee (1998: 85) similarly states, "Unless the nature of the relationship between informal and formal constraints is better specified, the inclusion of informal constraints by new institutionalists contributes to a problem of indeterminacy". He discusses formal institutions including laws, constitutions and governance systems, and informal institutions consisting of habits, customs, and norms. On one hand norms and customs are the basis from which laws and constitutions derive their legitimacy. On the other hand new laws would help shape future potential norms and customs that society is governed by. In other words, informal institutions are either embodied in formal institutions, or emerge as a result of adopting formal institutions for long periods of time. In this respect the process of learning through economic actors is a crucial component in the relationship between formal and informal institutions (Mantzavinos, et al, 2004). These generate confusion to identify the distinction between the different institutions, especially in a developing country (Lal, 1999; Voigt and Engerer, 2002).

In practice, the differences of identifying the nature of the link between the two sorts of institutions and their characteristics are connected with the agents' abilities of the evaluation about the costs and benefits along with an institutional change. For example, high sunk costs will limit the ability of institutional system to change. As the information about this change and this interaction is limited, the learning process about the nature of the interaction is critical in reducing the problem of identification of the costs and benefit of institutional changes. This is particularly the case where the sunk costs of institutional change are bigger than the benefit of this change. The problem of change related to this interaction is also related to the distribution of the sunk costs and benefits across power groups and the public. In other words, any reforms of institutions might lead to diverse reactions among social groups. Thus, the formal and informal institutions can manifest themselves in a way that may affect the transaction costs. We have to focus on the importance of learning about the interaction between the institutional constraints in order to receive the most accurate information about the sunk costs and benefits associated with a given institutional matrix (North, 1990). Given an institutional environment, on one hand, informal institutions manifest themselves to help reducing or increasing transaction costs (Lal, 1999). On the other hand, the implementation of inappropriate formal rules create a whole set of informal institutions for a given period (Feige, 1997). Feige (1997: 22) also mentions that, "Many of the transition economies have yet to establish the rule of law, and suffer instead from the legacy of regimes of arbitrary discretion that encouraged noncompliant behaviour as the informal norm. … Many of the centrally planned economies suffered from fundamental inconsistencies between formal and informal institutions. Consequently, the transition process had to deal with a legacy of noncompliant behaviours involving protective and predatory activities".

The World Bank 2002 World Report emphasises the point that formal institutions are ineffective if they are not compatible with the norms and behaviours (informal institutional constraints) of the recipient of new formal institutions. "For policy makers, building new formal institutions that complement existing informal institutions is a challenge. When inadequate attention has been paid to norms and culture, formal institutions have not delivered desired outcomes. But many successful institutional arrangements have flourished precisely because of their ability to harness, or adapt to, prevailing norms" (World Bank, 2002: 172). The World Bank Report (2002), also states that informal institutions are crucial to make formal institutions work properly and effectively and that formal institutions get more effective when the presence and effect of norms are recognised. "Policies that allow parallel operation of informal and formal

institutions increase options for market participants. Examples are courts that operate in parallel with informal enforcement mechanisms, formal rural credit schemes that explicitly use elements of local norms of solidarity, and institutions such as affirmative action that try to reduce discrimination" (World Bank, 2002: 172). However, where there is a vacuum of formal institutions, significant negative externalities might arise, ranging from worsening of the business climate (and thus the discouragement of legitimate and honest businesses) to the simultaneous operation of unrelated criminal activity. Correspondingly, there is a clear demand for good formal institutions (North, 1990).

Thus, informal institutions can play a substitute role when economic agents in the society perceive an inadequate regulatory system to "build up supplementary insurance" for economic agents (Voigt and Engerer, 2002:162). This additional insurance can be economic exchange within the family, or the business relationships relying on personal contacts. Another type of insurance is the enterprise network (relations), many of which have been created in transition countries. Voigt and Engerer (2002) also find that the internal (informal) institutions are very important because the process of changing the external institutions in a transitional environment is more time consuming than that was assumed by the policy makers initially. Johnson et al (1999) likewise conclude that relational contracting (which is informal agreements and unwritten codes of conduct that have a strong effect upon the behaviours of individuals within and between firms) and courts that can substitute each other in developing countries towards marketisation. They highlight that the role of courts is becoming more important than that of the relationship contracting over time and the larger the role of the courts, the larger the increase in efficiency.

Controlling the agents' behaviour can be set down in agreed rules usually in the form of written contracts. However, it is impossible to complete a long term contract without any problems as the effort of the appropriate adaptation to new circumstances is a challenge (Williamson, 1986). Consequently, contracts based upon trust and networks between long-term relationships would be important to avoid the deficiencies of written contracts. The relationship based on trust has an economic relevance in that reduces the specification and monitoring of contracts, provides material incentives for cooperation, and reduces uncertainty; transactions are thus cheaper, more agreeable, and more flexible (Nooteboom et al., 1997). The kind of contracting that contributes to the stability within which the exchanges occur could be beneficial for parties who are uncertain of the effectiveness of the third party mechanism. In this context, the dominance of

relational contracting in many developing countries (characterised by weak third party enforcement mechanism) would lead to inefficient outcomes due to restricting access to other actors who do not belong to a specific network. On the contrary, the effectiveness of the third party mechanism generally depends on the level and quality of social and moral norms, and particularly on the level of cooperative and institutional performance between different regions (Putnam, 1993).

2.7 Institutional Matrix and Types of Exchange

An institutional matrix influences the way that formal and informal institutions interact and enables individuals and organisations to undertake economic exchanges. Institutional frameworks vary among one another, from solving individual exchange problems to covering complex exchanges between actors. Hare (2001: 6) mentions some key "economic functions provide by institutions or institutional arrangements in a market-type economy:

- ✧ Private property rights and contracts;
- ✧ Banks and other financial markets: existence, functioning and regulation; i.e. reliable access to credit on reasonable terms and Bankruptcy/liquidation policy in place to facilitate orderly exit;
- ✧ Labour market institutions: social policy and the social safety net;
- ✧ Clear fiscal environment for firms, perceived as fair, predictable and enforced (this means, for instance, that in a multi-level country such as Russia it should not be possible for the regions to set taxes that conflict with national policies, and taxes should not be changed frequently);
- ✧ Institutions dealing with competition policy, industrial policy and trade policy;
- ✧ Trust between economic agents, trust and honesty in public institutions (lack of corruption, reliable law enforcement, incl. as regards business taxation)".

North (1990) highlights three situations where a variety of economic exchanges in the institutional matrix structures that are consistent with the transactions cost arising from the matrix, among informal and formal institutions and their enforcement characteristics. The first form concerns personalised exchange involving small-scale production and local trade, characterised by a lack of a third-party enforcement and low transactions costs for exchange. In this situation, social norms play a prominent role in the economic activities in a small community, where information flows (about business opportunities) may only be available to

members of a group, with outsiders excluded because of linguistic or cultural barriers (World Bank, 2002), where actors normally cannot obtain the scale of economies.

The second form concerns impersonalised exchange in which greater variety and number of exchanges with some economies of scale and scope. Parties involved are constrained by kinship ties, bonding, exchanging hostages, or merchant codes of conduct. The exchange is set within a context of regional and religious precepts rather than formal third party enforcement. In this context, a specific religion and a certain language might be regarded as a signal of trustworthiness and members of peripheral ethnic groups would be forced to join the persuasion of host society. The demand for reputation building in intercommunity exchange has promoted the development of specialised ethnic or religious groups as intermediaries that traditionally controlled a large proportion of long-distance trade in many parts of the world (Platteau, 1994). However, this type of society has high transaction and uncertainty costs for outsiders, as the institutional system is mainly supported by informal networks.

The third form of exchange is impersonal exchange with third-party enforcement, where a third party is essentially centred to complete the self-enforcement role played by the informal constraints. Effective third-party enforcement is best realised by creating a set of rules that make a variety of informal constraints effective. The formal rules are able to lower information, monitoring, and enforcement costs and hence make informal constraints possible solutions to the more complex exchange (North 1990). High adaptive efficiency is necessary to allow the interaction of the formal and informal constraints in these exchanges in order to create the potential wealth-maximising opportunities of individuals. These societies can thereafter obtain large economies of scale and scope and have a large number of actors available to undertake and develop transactions.

2.8 The role of institutions in shaping business performance

NIE studies institutions and how combinations of institutions interact with organizational arrangements, such as markets and firms (North, 1990). Particularly, NIE views the principal agent relationship between the owners of the firm, its management and other economic agents as a contractual arrangement of delegation of decision rights over the use of property (Hart, 1995; Jensen and Meckling, 1995). The ability of owners to create and appropriate value from resources depends on a clear delineation of the property rights to the resource, the ability to contract over their use for value creation, and the degree to which contract enforcement

institutions safeguard the right to appropriate value from their resource allocation decisions (Eggertsson, 1990; Hart, 1995). The fact that a firm has well defined control rights to its resources is certainly linked to the returns and the costs of its investments.

To ensure efficient resource allocation, firms incur "agency" costs of monitoring, bonding or incentivizing agents responsible for making resource allocation decisions (Jensen and Meckling, 1976). Mechanisms operating in the capital, product and labour markets mitigate problems of information asymmetry and align shareholder and managerial/agent self-interest impact the agency costs incurred by the firm. In less than perfect markets, due to information asymmetry and chances of opportunism, these costs are shifted to the firm which in turn increases the agency costs of monitoring, incentivizing or bonding agents. By providing information and reducing transaction costs, institutions can fill in the gap created by the failure of market mechanisms (Coase, 1988), thereby facilitating governance mechanisms which promote appropriate investments. Therefore, institutional contexts, through their definition of property rights and enforcement of contracts in an economy, not only provide the ex-ante incentives to managers to invest appropriately but also facilitate the ex-post governance mechanisms designed to curtail inappropriate investment behaviour (Williamson, 2005).

Investments are an important component and a critical determinant of the business performance and competitive advantage of firms (Greve, 2003; Jensen, 1993; Porter, 1992). However, investments are only desirable when firms have the potential to benefit from these investments. Thus, such investments only occur when potential benefits exceed the potential costs in pursuit of economic opportunities. Shahzad and David (2010) mentioned two important propositions regarding the appropriate investments. First, when the extent of problems of information asymmetry and opportunism can be overcome by market mechanisms, firms are more likely to invest when they have growth opportunities. Second, when the extent of problems of information asymmetry and moral hazard cannot overcome by market mechanisms, firms are more likely to invest when they have internally generated cash flow.

Given the capital for investment, in order to improve the business performance, Burczak (2006) claimed that free markets are the most favourable to freedom and interference will negatively influence the freedom. However, the self regulation of markets is similar to regulation of production by those whose motivations are toward their own economic gain (Veblen, 1921). Eventually, an important conflict is unavoidable in the context of self-regulation as there will be

a conflict between the individual micro-goal of capitalists, and larger welfare-enhancing macro-goals. The conflicting nature between the micro-goals of capitalists and the larger macro-goals of society once realized, leads to an investigation of the appropriate balance between freedom and control (Murray, 2010).

There are two broad dimensions of economic governance in existing measures of institutional quality or "rule of law" (Fernandes and Kraay, 2007). Acemoglu and Johnson (2005) used "property rights institutions" to measure the extent to which private business is secure from predation by the state and "contracting institutions" to measure how institutions such as the courts allow private parties to contract with each other. In business studies, firms' perceptions about the quality of the courts capture "contracting institutions" and their views on corruption capture "property rights institutions". It captures perceptions of the likelihood that property will be expropriated by the state, the likelihood that contracts will be enforced, and the likelihood that property is secure from crime, and so on. The former can also include the measures of expropriation risk connected with governmental behaviours, such as the measure of corruption (Kaufmann, Kraay, and Mastruzzi, 2005). Contracting Institutions can refer to the institutions securing the contracting relationship making it more manageable. This consists of business regulation, court, financing, and other issues being able to affect business operation and business competition, even the length of time required resolving a dispute over an unpaid commercial debt (Fernandes and Kraay, 2007). For instance, labour institutions are able to influence both firms and labour markets. Accordingly, firms are more likely to seek investment opportunities in nations that allow for more flexibility in dealing with the workforce that may attract foreign investment as strict regulations obstruct efficient labour contract (Kleiner, 2009). Acemoglu and Johnson (2005) further developed a framework to measure the rule of law into two dimensions. The first is "property rights institutions" that capture the extent to which private property is secure from predation by the state, for example through outright expropriation, or less dramatically, from corrupt officials demanding bribes in exchange for favours to the firm or individual. The second is "contracting institutions", capturing how the effectiveness of institutions that are used to mediate disputes between private parties, such as the courts and the judicial system. According to Fernandes and Kraay (2007), there is a very strong negative correlation between this measure of institutional quality and levels of development: countries with worse institutional quality are on average poorer than countries with good institutional quality.

2.9 Summary

For the NIE scholars, if third-party enforcement is weak, i.e. in most developing and transitional countries, transaction and uncertainty costs are high because of the dominance of personal and impersonal exchange with poor third party enforcement. This is especially true where the formal rules as third-party enforcement mechanisms are not compatible with the informal institutions. In these societies, such as China, the adaptive efficiency is usually low and likely to result in the problems in covering the missing connections between the formal and informal institutions. Weak third-party enforcement eventually leads to more emphasis on informal institutions to govern the exchange. The resulting outcome thus appears with high transaction and uncertainty costs for business operations.

The NIE scholars have theoretically discussed the importance of the institutions in economy growth and development. In practice, a more important matter appears to be how important is the role of the institutions in affecting the business performance of the different firms. The next chapter focuses on the relations between the institutions and business performance in China, and the author attempts to build a conceptual framework about the relations between the institutions and business performance.

Chapter 3: Institutions in China and Conceptual Framework

3.1 Introduction

Graph 3.0 China Official Unemployment Rate

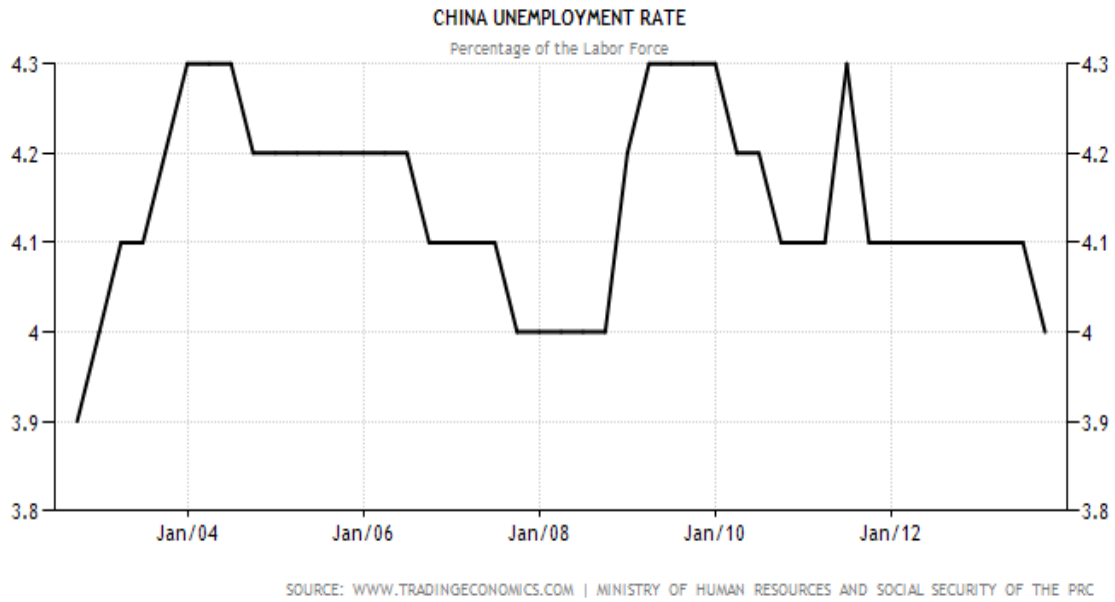


Table 3.0 Estimates of China's Unemployment Rate (per cent)

Source	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
XZ	3.2	3.6	4.3	4.8	5.5	4.5	6.3	8.1		
KX	3.2	3.6	4.4	4.9	5.7	6.9	7.1	7.1	6.6	6.2
GPZa	7.1	8.6	7.7	7.3	9.2	10.8	12.5	11.5		
GPZb	5.9	6.8	7.7	8.5	9.5	10.1	10.8	11.5	12.6	13.1

Note: XZ=Xue and Zhong (2003); KX=Knight and Xue (2004); GPZa= Giles, J., Park, A. and Zhang, J. (2005) based on the research of Xue and Zhong (2003); GPZb= Giles, J., Park, A. and Zhang, J. (2005) based on the research of Knight and Xue (2004)

A large amount of FDI inflows to China and China has achieved a rapid economic growth, but China also has to face several serious social and economic challenges. Some basic infrastructure and services essential remain weak for private sector growth (Eggenberg-Argote, 2005). When regarding a population that is more than 1.3 billion, the unemployment problem is always the primary concern of the Chinese government and is becoming more and more of a serious problem. As the Chinese official figures regarding unemployment are not convincing (Graph

3.0), a number of scholars have estimated the unemployment rate in China (Table 3.0). Mr Li, the prime minister of China, has stated that China would need only 7.2% growth to ensure its employment targets. China needs that economic growth rate to create 10 million jobs and to ceiling the urban unemployment rate at around 4%. He also added "The reason why we need to stabilize growth is that we need to guarantee employment" (The Wall Street Journal, 2013). China can still be summarised by large public sectors, with centralised governments, overstaffed civil services, and weak systems of accountability (Green, 2005). Its business environment can hence be characterised by a weak institutional framework as the institutions that are often unclear or inconsistent with international norms (Lynch, 2002).

Table 3.1 Instruments Measuring the Effects of the Government

Dimension 1: Economic and Government Policies	Dimension 2: Restrictions on Business Operations	Dimension 3: Government and Government Administration
✧ Preferential tax policy provision ✧ Preferential industrial policy provision ✧ Other preferential/promotion policy provision ✧ Earlier implementation of economic reform policy ✧ Intensities of implementation of economic reform policy ✧ Instabilities in political/social aspects due to unanticipated changes in central ✧ governmental policies ✧ Stability and continuation of economic policy ✧ Local government FDI policy a appropriateness	✧ Freedom of capital and profit remittances ✧ Fewer differential treatments between foreign and local enterprises ✧ Easy settlements on foreign exchange balances ✧ Looser regulations on export percentages ✧ Looser regulations on foreign equity ratio ✧ Adequate financing from local capital markets ✧ Reasonable regulation on environment protection ✧ Fewer labour disputes	✧ Efficient government administration ✧ Transparent government administration ✧ Capabilities of government in regulating the economy ✧ Commitments to economic reform by government leaders ✧ Healthy/sound legal system ✧ Limited government bureaucracy ✧ Little government corruption ✧ Little abuse in fees collection ✧ High autonomy for business enterprises

Source: Ng and Tuan (2001)

Since the 1980s, along with the transitional reforms conducted by the Chinese government, there are a number of changes in the institutions, in the context of business constraints. Table 3.1 lists three dimensions of measuring instruments about how a government influences the business performance, including government policies, restrictions on business operation, and government administration. The conceptual framework is partly built on the three dimensions as these three dimensions and the relating issues in details provide the main aspects of the constraining factors on business operation. In addition, when transiting autarky to a market oriented economy in China, it is practically essential to have social participation and cultural support to sustain a continuous progress of business operation in economic reforms. In this

chapter, the author presents the main research hypotheses on the relationships between the institutional constraints and the business performance to explore how to enhance business operation in developing or transition countries. The author chooses five aspects of business constraints, in terms of finance, legal institutions, business competition, business rule and regulation, and corruption.

3.2 Research questions and research objectives

3.2.1 Research questions and objectives

In Chapter 2 we have discussed the importance of the institutional factors on the operation of firms. So far, we have suggested that institutional factors, both formal and informal constraints constitute the main obstacles to the business performance of enterprises in China. To answer the question of "the relations between institutions and business performance of the firms in China", this research explores the business influences of institutions, through the investigation of business constraints on the firms with foreign investment, and on the firms with private ownership.

In China, the FDI inflows and the ensued reforms of institutions resulted in the emergence of private ownership in this "Communist country" as the institutional reform does not only work to create a favourite business environment for FDI, but also bring more business freedom towards a market oriented economy (Chow, 2001). The FDI inflows and the development of private ownership work together to create a competitive environment where the firms are forced to enhance their efficiencies and operations. An efficient business environment should therefore be connected with a successful economic transition, including changing institutional framework in China. Employing the NIE as the theoretical framework, the author argues that a better business performance in China depends on an efficient implementation of institutions in the process of economic transition. In other words, the achievement of better business performance depends on the support of both formal and informal institutions.

The research in this chapter examines and confirms two main arguments that emerge from the analyses of business obstacles carried out in Chapter 2. The first one argues that the perceptions across different owners and firm size vary with regard to individual constraints, including both informal and formal institutions. The second group of hypotheses covers the importance of both formal and informal institutional constraints in explaining the performance of firms in China.

3.2.2 Business performance measurement

Business performance measurement systems are the information-based routines and procedures used to maintain or alter patterns in organizational activities (Kellen, 2003; Simmons 2000). As a quantitative value that can be used for purposes of comparison, Simmons (2000) looks at business performance measurement as a tool to balance five major tensions within a firm:

- Balancing profit, growth and control
- Balancing short term results against long-term capabilities and growth opportunities
- Balancing performance expectations of different constituencies
- Balancing opportunities and attention
- Balancing the motives of human behaviour

As a multidimensional construct, firm performance can be measured both financially and strategically (Peng and Luo, 2000). In the market domain, the measurement is derived from the profit maximisation incentive (Dollery, 2001). China is not well developed, volatile, and market based measures may not reflect firms' true performance (Peng, 2004). The author chooses sale data as a financial measure of business performance as Markides (1995: 114) found that "no matter which the three profitability variables are used, the result remains unchanged." In addition, the performance of top managers in China, especially SOEs, is evaluated and measured by market expansion in terms of firm growth (Walder, 1995). Accordingly, the author selects the investment data as a strategic indicator to measure the business performance.

Consequently, in this thesis, the measurement of business performance of the firms consists of their sales and investment respectively. The reason for including investment here is due to the fact that the value of sales itself may not provide a good indication on the actual performance of firms. One reason for this is the strategy of multinational cooperation in developing countries, particularly the strategy of transfer pricing. After all, foreign owners will never increase their investment in China unless they are satisfied with and are confident that the performance of their firms will be satisfactory, both at present and in the future.

3.3 Research hypotheses

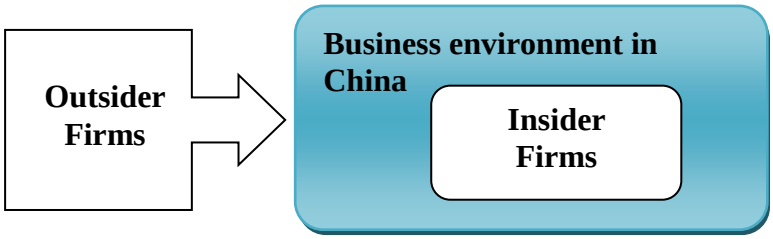
3.3.1 The insiders-outsiders difference

It has been observed in countries which undertook rapid transition and reforms to free market with an institutional template not developed enough to support the reforms in question. Taking into account the poor institutions of China, the weak institutional framework, information flow

across and between the actors in the business environment cannot move efficiently (Ghecham and Albahri, 2011). The deficiencies of the institutional infrastructure undermine the effectiveness and consistencies of the enforcement of rules across the players. As a result, the opportunities do not spread evenly across the players in the society in general and across the investors in the business environment in particular. The opportunities are contingent on the amount of special connections that players in the environment are endowed with. The informal institutions can be either the type of relationships that investors can legitimately have by building long-term contacts that foster trust and cooperation amongst them, or the concepts related to corruption.

Udayasankar and Das (2007) note that the business operation is affected by: (1) legislative content, such as private property protection laws (LaPorta et al., 1998); (2) judicial efficiency (Klapper and Love, 2002); (3) support for business operation (Klapper and Love, 2002), which can understood as business rules and regulations, efforts to sustain competition, and anti-corruption. In addition, the business performance is sensitive to the different types of firms, such as the factor of firm size and ownership. The weak formal rules and their level of enforcement lead to the emergence of two kinds of firms: insiders and outsiders. The institutions governing the business environment in these circumstances is more favourable to insiders who are more locally endowed that can allow them to have more access to the business environment and face lower transaction costs than outsiders. In fact, a firm without foreign ownership may have more advantages than the FIEs because of the familiarity with the domestic formal and informal institutions. However, the domestic firms may also stand disadvantages in a given institutional environment than the FIEs. In addition, the influences of institutions can also be connected with the intervention of government in China, such as government ownership. This leads to a set of hypotheses that highlight the fact that informal institutions (such as corruption) can conflict with the logic of formal institutions and will make market entry difficult for new entrants and for firms that do not share the same information flows as others. In this case, the market is divided into two sorts of firms, outsiders and insiders, where the outsiders usually have higher transaction and uncertainty costs than insiders because of less information and connection disadvantages compare to insiders (Jacobs, 1999; World Bank, 2002a; IMF, 1999). This is explained by the fact that "much reform consists of struggles by 'outsiders' to gain the status of 'insiders' and by 'insiders' to protect their territory" (Jacobs, 1999: 10).

Graph 3.1 Insider and outsider firms in the business environment of China



In this research, as shown in Graph 3.1, the insiders are the firms without foreign ownership (domestic firms thereafter) and outsiders are the FIEs (foreign firms thereafter), or the insiders are the firms without government ownership (private firms thereafter) and the outsiders are the firms with government ownership (non private firms thereafter). A private firm can be invested in by FDI or domestic owners. The blue area represents the institutional constraints in China. Both the formal and informal institutional constraints are considered, consisting of financing, legal system, business competition, rules and regulations, and corruption. In regards to the influences of these institutional factors on the business performance, the author is going to investigate the differences between insiders and outsiders and to build a number of hypothesis related.

3.3.2.1 Constraints on business competition

All firms try to survive in market competition and the factors that influence the level of business competition is another business constraint. Price difference is among the business competition constraints, the most unfair competition directly results from this. High prices negatively affects local market growth and accounting return as the consumers appear to be price sensitive (Luo, 1995), and consumers tend to value low cost over the other product attributes (Mahatoo, 1990).

From the experiences of Hong Kong and Guangdong, economic/ government policies and government/government administration toward business operations are the two major dimensions in determining a FDI-friendly environment (Ng and Tuan, 2001; 2002). Given the WTO agreement, it is important to meet the expectations of foreign investors, in terms of a healthy/sound legal system, government bureaucracy and corruption, and transparency and efficiencies of government administration. The reform in China can create new obstacles of business competition when removing the old ones. For example, since the middle of the 1990s, the Chinese government has initiated privatization and corporatization of SOEs (Chan et al., 2007). However, the government still retains strong control over majority of them (Bai et al.,

2004), and firms with larger shares of state ownership still appear to have smaller investment-cash flow sensitivity than firms with lower shares of state ownership (Chow et al., 2010).

Firstly observed by Kornai (1979, 1980, and 1986a), this is also called "soft budget constraint". This constraint affects business competition that SOEs receive subsidies when they experience continual losses as the government bails out bankrupt SOEs to avoid unemployment and political unrest. That is, politicians offer subsidies to the SOEs in financial difficulties to save jobs and maintain their reputation (Shleifer and Vishny, 1994), despite the fact that soft budget constraint affects incentives of economic agents. The soft budget constraint was hence a major cause of inefficiency in socialist economies (Krugman, 1998). At an inter-firm level, a SOE has access to subsidized credit from the government up to a maximum amount, and the soft budget constraint reduces the credit multiplier faced by the SOE. World Bank (1997) estimated that more than 30% of the bank loans in China to the SOEs were non-performing, and that in turn leads to the competition obstacles to the private sector. Therefore, the foreign firms and the private firms are more constrained as they cannot receive subsidies.

Collude for credit is another business competitive constraint. The credit risk in China is generally higher than that in North America, Japan, and Europe. There are three main reasons: (1) state-owned banks are driven by policies rather than risk-adjusted profit, (2) the shortage and other problems of specialist, and (3) poor internal control. As a senior officer may be able to influence a credit approval (Li, 2006), it is beneficial for foreign investors to invest in regions where they are able to establish a stable relationship with the local governments (Tse et al., 1997; Zhou et al., 2002). Although non-state firms and SOEs all have incentives to collude, SOEs face the least collusion costs because their political power as small local auditors are under strong government influence. Being a major client of the region's local auditors, the government can threaten these auditors by asking its SOEs not to use the auditors' services. Further, many of the local auditors' partners are ex-bureaucrats of the local governments, and the same governments serve as controlling shareholders of the SOEs as these audit firms' clients. Governments can also influence the audit firms through their finance bureaus, audit bureaus, and local institutes in the licensing of audit firms, the administration of qualifying exams, and regulating audit firms' daily operations (Tang, 1999). As a result, SOEs are more likely than private firms to operate in the business environment with more government intervention and less developed credit markets (Wang et al., 2008), and both the foreign firms

and private firms are more constrained by the competitive constraint of credit collusion than the SOEs.

The competition constraint of credit collusion is connected with government interference in business operation, and should originally be indicative of protection of private properties (Du et al., 2008). On one hand, government intervention is a second-best solution to the lack of formal protection of private properties, particularly because of the lack or weakness of the court system. On the other hand, government assistance may lead to rent-seeking and even corruption as entrepreneurs lobby or bribe officials to seek favour in resolving business disputes (Frye and Shleifer, 1997; Shleifer and Vishny, 1999). Based on the study of Du et al. (2008), there should be the practices favouring the foreign firms and the SOEs with large or medium size, against the private firms. In other words, the private firms are apparently more constrained by the competitive obstacles with government involvement, though it is actually difficult to judge these constraints on business performance with different ownership once the rent-seeking behaviour happens.

A Memorandum of Understanding (MOU) was signed with the United States in 1992, covering a range of issues ranging from market access to Intellectual Property Rights (IPR) protection. For the first time, the MOU required China to phase out internal trade regulations and import restrictions such as import quotas and strict sanitary standards (Huang, 2003a). However, China is still at the centre of debates about intellectual property violations and has been part of many international disputes with several industrial nations over IPR infringements (Cheung, 2009). The lack of protection and enforcement of IPR include (a) clarification on the enforcement thresholds needed for prosecuting acts of trademark counterfeiting and copyright piracy; (b) Chinese customs' disposal of confiscated goods that infringe intellectual property rights; (c) the scope of coverage of criminal procedures and penalties for unauthorized reproduction or distribution of copyrighted works; and (d) the denial of copyright protection and enforcement for creative works that are unauthorized or censored in China (WTO, 2009; Zhu and Liu, 2008). The high level of complaints against IPR practices indicates the existing gap between IPR laws on the books and actual enforcement in China (Awokuse and Yin, 2010). Based on a panel data set (1993-2001), Du et al. (2008) suggest that US multinationals prefer operating their business in the regions that have a better IPR protection. That is to say, the foreign firms should be theoretically beneficial and less constrained by the constraint related to violation of patent.

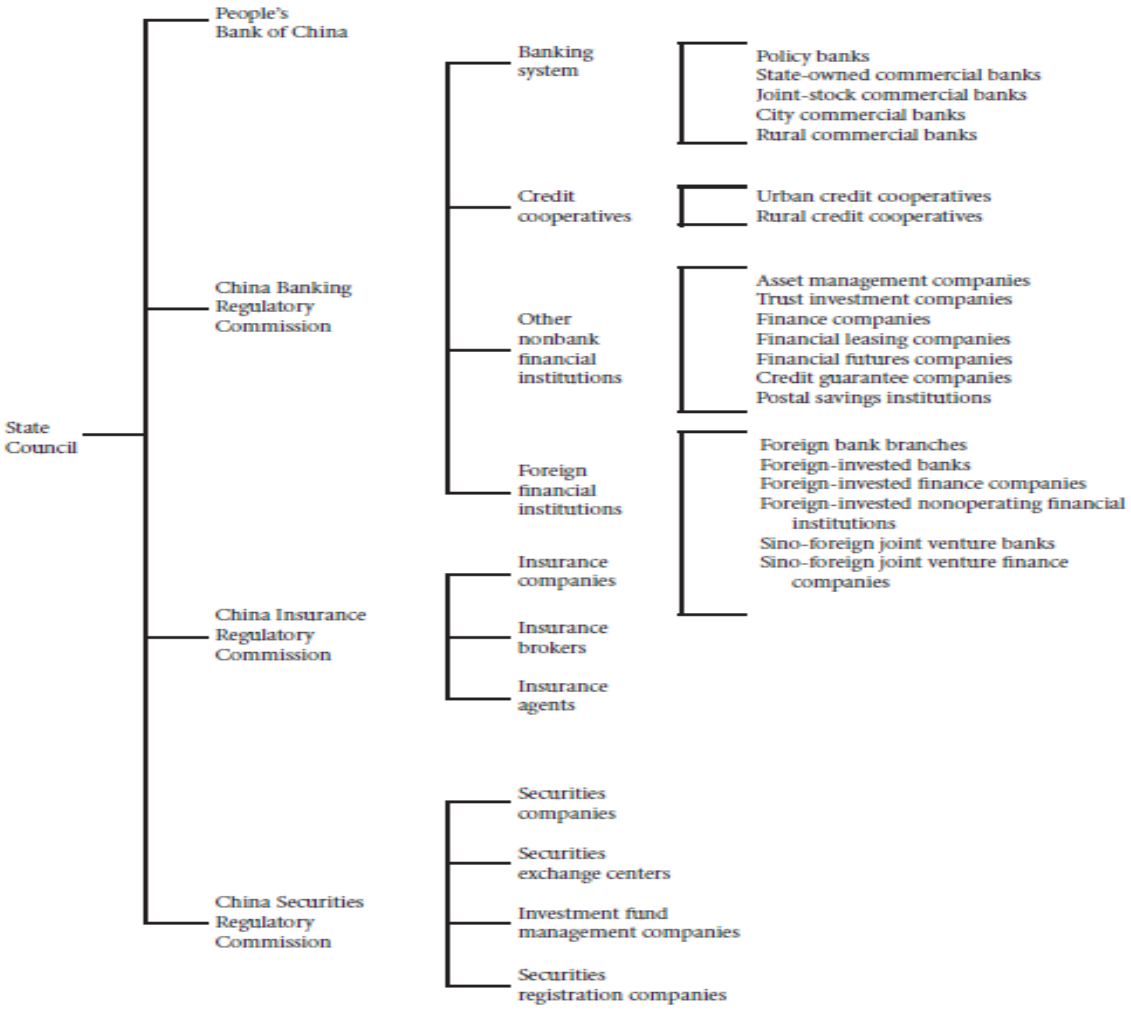
Some researchers have different opinions. For example, You and Katayama's (2005) empirical observations indicate that, working as a subsystem of the overall IPR protection system, the patent and trademark registration system does not function effectively in China. Their results furthermore suggest that patent and trademark registration instead provide a means of local imitation and could be facilitating technology transfer/diffusion in China. The investigation of these competitive constraints on business performance can be implied as the hypotheses:

Hypothesis 1 **(H1a)**: The foreign firms are less constrained by the constraints of business competition than the domestic firms.

Hypothesis 1 **(H1b)**: The private firms are more constrained by the constraints of business competition than the non private firms.

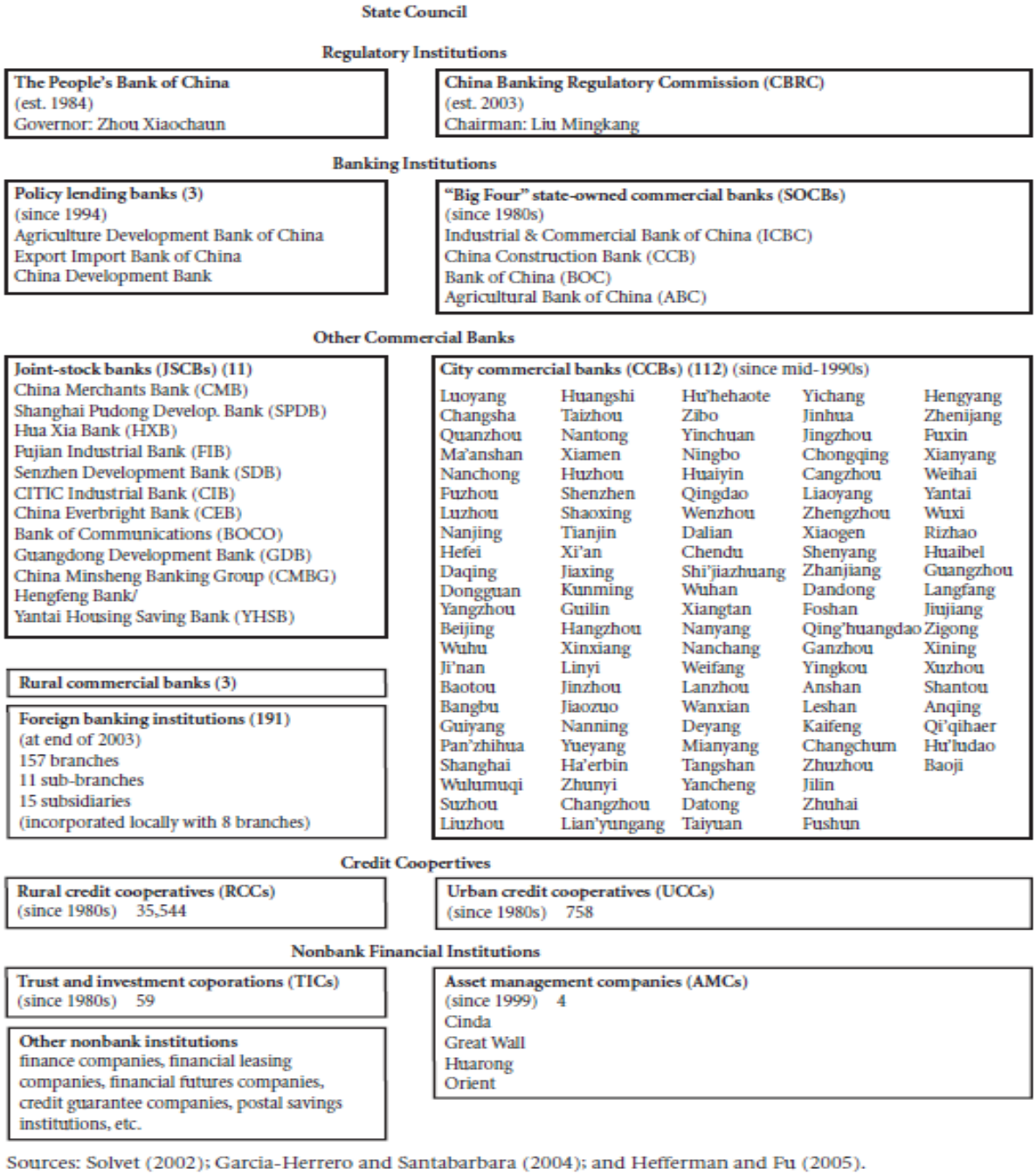
3.3.2.2 The financial constraints

Graph 3.2 Structure of the Chinese financial system



Sources: Solvet (2002) and Yang (2004).

Graph 3.3 Structure of the Chinese financial system



Sources: Solvet (2002); Garcia-Herrero and Santabarbara (2004); and Hefferman and Fu (2005).

As a result of China's entrance to the WTO in 2011, more foreign banks enter the domestic credit markets because China is committed to opening its financial markets substantially to foreign investors. However, La Porta et al. (2002) indicate the government still owns 99.45% of the 10 largest commercial banks, and this governmental control was strengthened recently (Shang, 2009). As displayed in Graph 3.2 and 3.3, the structure of the financial system is still a planning system alongside with the rapid development of financial markets (Lau et al., 2000). The banking sector includes four inefficient state-owned banks, and its financial system is

definitely dominated by a large but inefficient banking sector totally under the control of the government.

Typically, three types of financial institutions handle the vast majority of the financial business, which are commercial banks, life insurance companies, and investment banks (Stearns and Mizruchi, 1993). Allen et al. (2005) find that there are four most important financing sources for all firms in China, comprising bank loans, firms' self-fundraising, state budget, and FDI. Among them, the two most important financing channels are bank loans and self-fundraising. Bank loans provide a large amount of funds and constitute a large portion of firms' financing needs, up to 25% of their total financing needs in setting up period. Self-fundraising includes proceeds from capital raised from local governments, communities, other investors, internal financing channels such as retained earnings, and all other funds raised domestically by the firms. The China Statistical Yearbook (2000-2002) displays total self-fundraising reached US$275.5 billion in 2002, while domestic bank loans were US$106.6 billion for the same year. Moreover, private sector relies mostly on self-fundraising, about 90% of total financing. Even for SOEs, self-fundraising still captures a range between 45% and 65% of total financing.

Although China's stock markets are actually relatively more efficient than banks, they are relatively smaller, in terms of both market capitalization and the total value traded as a fraction of GDP (Allen et al., 2005). Chinese authorities traditionally treat its banking system as a substitute for state financing in order to fund too many inefficient firms with large size, especially the SOEs. The lending quotas were issued to the SOEs based on the authorization, while private firms were excluded from lending quotas. Because the access to the stock market is mainly restricted to large- / medium-sized SOEs and the Chinese banks are mostly state owned, there is a bias towards SOEs and against other firms in the access of finance (Chow and Fung, 1998). Given that private sector now produces more than half of the GDP of China, they only receive 27% of loans and are excluded from the country's corporate bond markets (Farrell and Lund, 2006).

In addition, there was a legal bias against private firms, which made it harder to collateralize their assets in order to obtain loans, and also made it riskier for banks to lend them money (Huang, 2003). Although China theoretically abolished lending quotas at the end of the 1990s, banks still consider private firms to be riskier, either due to their short credit history or smaller chance of being bailed out by the government. Moreover, state banks are still determined by

political reasons rather than commercial motives (Park and Sehrt, 2001). The financial system in China therefore has the inefficient consequences: wasteful investments yielding negligible returns, restrictive funding for the private firms that drive growth, pervasive state ownership of financial institutions which stifles competition and lowers efficiency, a feeble array of financial products for consumers, and minimal growth in corporate bond markets (Hericourt and Poncet, 2009).

Cost of borrowing constitutes a major component of business costs. When the cost becomes higher at home relative to the host country, firms are more likely to refrain from borrowing money at home for overseas investment (Grosse and Trevino, 1996). Higher capital costs may cause the foreign firms to lose cost advantages in the host countries, and the risk to access the foreign financial sources at a high cost for overseas investment can be regarded as the business constraints for the foreign firms (Zhao, 2003). The firms are variously constrained by financing as these overwhelming barriers are obvious for domestic firms in the economies with underdeveloped capital markets, and the foreign firms might have a competitive advantage because of their access to better functioning foreign capital markets (Foley et al., 2004).

In China, private firms have to depend on internal capital for better performance and development. But as internal capital is often limited, especially for entrepreneurial firms, external finance is crucial to the growth of private firms to provide an additional source of capital and to allocate the capital factor efficiently (Levine, 1997). However, in China, the protection of private properties was not formally written until 2004, and the legal protection of private property would cost more time to set up. As a result, for private enterprises, access to bank loans can be blocked due to the lack of protection of private properties. Like the other developing and transition economies, the economy of China is dominated by the public sector (Todaro and Smith, 2009). The public sector may influence the government to change its lending policies to favour the SOEs and against the private firms (Bai et al., 2006). In other words, poor protection of private properties is the fundamental reason for expropriation and discrimination, which leads to financial constraint on the business performance of private firms.

In general, when private firms face higher risks of expropriation, banks are less willing to lend them money, thereby making their access to bank loans more difficult (the supply side effect). The demand side story is more complicated. On one hand, with the risk of expropriation, private firms have less incentive for investment and hence lower demand for bank loans. On the other

hand, as Johnson, McMillan and Woodruff (2002), and Cull and Xu (2005) argue, in the presence of expropriation, private firms actually prefer external finance to internal finance for further development, though the incentive for further development itself has been weakened. Overall, the supply side effect seems the dominant effect for private enterprises in China. That is to say, the private firms are more constrained by limited access to external finance.

Thus, a firm's business organisation and corporate governance practices ultimately determine its business performance (Liu, 2005). Xu and Wang (1999) reported that the business performance in China is negatively related to the level of state ownership. Sun and Tong (2003) also find that share issue privatization is associated with improved corporate performance. In the context of the ownership structure and the Chinese listed firms' stock market valuation, Tian (2001) finds that government ownership worsens a firm's performance when government ownership is small, but improves a firm's performance when government ownership gets significantly larger.

There are a number of empirical studies at the firm-level to illustrate the financial constraints on business performance. Forssback and Oxelheim (2008) also find that financial advantages may be important for all firms but should be particularly important to FDI in small industrial or emerging market countries with relatively illiquid and/or segmented domestic capital markets. Firth et al. (2008) discovered that state-owned banks in China tend to impose fewer restrictions on the capital expenditure investments of low growth firms with a high state ownership. It was also suggested that political obligations of state-owned banks to support these firms meant that they fail to play a monitoring and disciplining role in preventing overinvestment. Guariglia and Poncet (2008) confirm that over the period 1989-2003, FDI is used to lighten the costs associated with the inefficient banking system in China. Using the data of 1300 domestic firms from 2000 to 2002, Hericourt and Poncet (2009) note that it is helpful for private domestic firms to avoid financial obstacles by developing cross-border relationships with foreign firms.

In a cross country research, Beck et al. (2005) empirically finds that the foreign firms face lower financing obstacles when keeping higher growth rates, and the non private firms are subject to more financial constraints. Conversely, Li et al. (2009) highlights the difficulty of the private firms in accessing financing. In this research, the factor of private ownership increases large and medium firms' abilities to access financing supports, while reducing the small firms' chances of having long term financial support. Unless these firms are large enough, small private firms are

more likely to be constrained from having long term financing. Therefore, two hypotheses are applied to investigate the financial constraints on the business performance:

Hypothesis 2 **(H2a)**: The foreign firms are less constrained by the constraints of finance than the domestic firms.

Hypothesis 2 **(H2b)**: The private firms are more constrained by the constraints of finance than the non private firms.

3.3.2.3 Constraints of business rules and regulations

The government has a number of choices to deliver the targets of job creation, innovation and improve competitiveness (Dennis, 2004). This includes lowering the entry barriers to new firms, reducing the difficulties on those individuals already operating their business, and using public funds to support individuals (Van Stel et al., 2007). It is thus crucial to develop and change in accordance with the development and change of economic, political, cultural and other conditions. In a fast growing economy, regulatory rules change rapidly along with different economic policies, and a rationale in the creation of these rules and regulations is intentionally and inherently flexible, which may lead to the basis of uncertainty in the implementation and interpretations of the law (Corne, 1995). In China, administrative bodies and local governments both use administrative specification and interpretation to introduce specificity to suit the implementing agency properly. Instead of taking the letter of law for granted, the foreign firms have to access the relevant rules, interpretations, and circulars at both the national and local levels. More interestingly, in practice, the business operation of foreign firms also depends on the reinterpretation with legal flexibility (Corne, 1995).

We can associate corruption within governments with the predictability of policies and regulations that protect contracts and property (Acemoglu and Johnson, 2005). Corruption can be prevented by facilitating contractual arrangements between transacting parties and by preventing public officials from acting arbitrarily for personal gains. Investment and growth appear better explained by the latter; whilst the former primarily influences only the forms of contracting that occur. Business regulations should reinforce the attractiveness of business opportunities to investors by providing credible assurances about the permanence of those policies, honouring policy commitments, implementing and enforcing property rights (Fan et al., 2007). Thus, regulation serves to improve corporate governance standards, particularly as firms seek to avoid disciplinary costs. However, meeting the standards mandated by regulation itself also creates certain costs for firms.

The foreign exchange reform in China is a gradual transformation of an exchange allocation mechanism. The foreign exchange regulations require a firm to generate all foreign exchange needed for the remittance of dividends, expenditures and other distributions. Beginning in 1994, three changes constitute the foreign exchange reform that is moving toward a more liberalised regime and toward a greater facilitation of FDI. The WTO accession was a driving force for the liberalization of its capital mobility control regime as China is committed to opening its domestic financial markets to a large extent. However, China still depends on these controls to ensure the functioning of its exchange system, i.e. the complicated approval procedures for transactions under the capital account, transaction based verification for import payments and export receipts, continuous monitoring of exporters' performance in meeting foreign exchange surrender requirements, active intervention by the central bank in the foreign exchange market, heavy use of circulars for policy clarification and changes, and continuous crackdowns on illegal foreign exchange transactions (Lin and Schramm, 2003). Given the risk of reducing the effectiveness of its efforts to attract FDI, there are two reasons why China still uses such regulations to constrain the foreign investment. The foreign exchange regulations help China to protect its foreign exchange reserves and encourage the foreign firms to export in order to improve the trade balance of China. Moreover, these regulations promote localisation of FDI by speeding up the transfer of technology and upgrade the manufacturing capabilities (Chen, 1997).

During the transition, there is a rapid increase in labour disputes and considerable difficulties in dispute resolution because the previous labour regulations associated with politics, administration and common interests have been broken down. Moreover, the increasing competition has created new pressures on enterprises to increase productivity and lower costs as the downward pressures on workplace conditions. To reform labour administration, China has promulgated a range of laws, regulations, and decrees that codify workers rights and health and safety protections. A new Labour Law came into effect on Jan. 1, 1995. A revised Trade Union Law was announced October 28, 2001. A Law on Occupational Diseases Prevention and Control became effective May 1, 2002. A Law on Safe Production came into effect November 1, 2002. The government has also advanced a range of regulations specifying health and safety standards in industrial operations, such as: Regulations on Safe Management of Dangerous Chemicals; Regulations on Labour Protection for Using Toxic Substances in Workplace; and, Regulations on Protection against Radioisotopes and Radiation-Emitting Apparatus.

However, on almost every level, workers struggle to protect themselves, such as to increase wages, reduce working hours, set reasonable production goals, curb physical and sexual harassment, and even minimally improve workplace safety conditions. It becomes urgent and indispensable to direct and regulate labour relations to achieve a stability and healthy development of the economy (Cheng, 2004). Although there are opportunities for workers to sue their employers for compensation, they still have to face courts that generally are not independent from the state and regional government (Pan, 2002). Actually, the government is more interested in attracting FDI, than in protecting workers and the environment. Accordingly, the foreign firms should be less constrained by the labour regulations than the domestic firms.

In an emerging economy, the difficulty associated with making regulations is to draw the distinction between competition and concentration (Lall 2000). Nee (2000) shows how the elimination of a free market creates speculation and the corruption of bureaucrats. As a pro-market force with legal-rational bureaucratic discipline, the regulation on market competition increases the regulatory burden of the states, negatively influencing the business performance. When taking industrial promotion as the priority, competition becomes less important. This is so crucial that even domestic firms are not treated equally, as the less efficient SOEs systematically receive preferential support while private firms are discriminated. This form of protectionism in rules and regulations can only encourage less efficient firms and prevent the improvement of business performance, at heavy cost to domestic consumers and economic growth (Wang, 2003). That is to say, both the foreign firms and the private firms are more constrained by the rules and regulations.

Similarly, Wieneke and Gries (2011) note the financial regulations constrain the business performance of the enterprises. This is due to the fact that financial regulations limit competition in the banking sector, and therefore decreasing the availability of the start up costs for the small and medium size enterprises. In China, some specific restrictions influence the business performance of the FIEs negatively as some regulations of capital controls prevent FDI inflows (Kinoshita and Campos, 2006), such as capital account measures that liberalize inward FDI, as well as approval requirements and restrictions on profit remittance abroad (Lin and Schramm, 2003).

According to a study of the relationship between regulation and entrepreneurship, when private business owners face more the regulatory constraints, they are more likely to set up their

business in the informal sector (Van Stel et al., 2007; World Bank, 2005). Their empirical results also show that labour regulations have a negative influence on both nascent and the young business operation for private owners (Van Stel et al., 2007). Javorcik and Wei (2004) find that FDI is deterred by tight environmental standards. Zhang and Fu (2008) similarly note that environmental regulations influence the business operation of the FIEs, and their empirical results indicate that foreign investors are attracted by the relatively weaker environmental regulations in China.

In theory, all firms are likely to benefit equally from the application of business rules and regulations. Udayasankar and Das (2007: 270) find that "When the focal firm fails to meet the levels of governance mandated by regulation it suffers losses, while firms which respond quickly gain in comparison with other firms". Therefore, the relationship between the business performance and the regulations is also dependent on the competitiveness of the business environment. To study this relationship, two hypotheses are summarised:

Hypothesis 3 **(H3a)**: The foreign firms are less constrained by the constraints of business rules and regulations than the domestic firms.

Hypothesis 3 **(H3b)**: The private firms are more constrained by the constraints of business rules and regulations than the non private firms.

3.3.2.4 Corruptions constraints

Corruption is a form of white collar crime and involves the exploitation of an entrusted power for private gains (Sun, 2004). It refers to the exercise of public power for private gain, or a public employee uses his or her specific position to obtain private benefits. When an official has discretion over the distribution of a good (Rose-Ackerman, 1999), he or she has an incentive of corruption to ask for a bribe to increase his or her income in exchange for a good that has little cost to him or her (Shleifer and Vishny, 1993). Corruption ultimately results in the inefficient resource allocation (Mauro, 1998). The World Bank (2006: 1) states, "Bad governance is associated with corruption, distortion of government budgets, inequitable growth, social exclusion, lack of trust in authorities". The corruption basically indicates a lack of respect for the rules and regulations that govern economic interactions (Curevo-Cazurra, 2006), and firms have to make additional, irregular payments to get things done (Kaufmann et al., 2003) as they have to offer a bribe and obtain benefits to which it would not otherwise have access. However, the official can withhold approval of a permit until a bribe is paid. Even worse, government officials have an incentive to create additional regulations with the sole purpose of generating an

opportunity for more bribes (De Soto, 1989). As a result, even when the bribe results in fulfilment of the promise, the firm still faces costs increasing (Shleifer and Vishny, 1993).

In a research of Allen et al. (2005: 67), China's corruption index is the worst among the seven developing countries in transition to a market based economy, consisting of China, India, Pakistan, South Africa, Argentina, Brazil, and Mexico. The corruption in China is connected with "socialism with Chinese characteristics", which resulted in inevitable problems in business operation. The huge increasing opportunities in private sector is combined with the traditional power of government that has led to a creation of corruption, recognised as a challenge to China's economy and to its reforms (Cole et al., 2009). The extensive state control and state intervention in the national economy, the lack of democracy and freedom of media, the weak rule of law, etc. have contributed to the severe corruption problem (Du et al., 2008).

Moreover, since the early 1990s, the Chinese financial sector gradually moved from a highly centralized regime to a relatively decentralized system that gave local governments and SOEs more discretionary power in fiscal policy. The decentralization gives local officials more power and at the same time the distribution of power at local levels became more compartmentalized (Sands, 1990). Under the control of the government, the resources of financial institutions become the major targets for corruption. There was not any meaningful supervisory mechanism in place to control illegal trading activities of the stock market in China, such as the corruption of the executives of financial institutions and the regulatory officials (Deng, et al. 2010).

Although China should open its market after entering the WTO, the state maintained its sole monopoly over some key sectors and refused to introduce any competition in these sectors because of ideological, political, and economic reasons, such banking, railway transportation, telecom, and etc. The officials use every possible means to seek rent through monopoly in the economic areas that had not been open for market competition (Pei, 2006). As a result, corruption in banking area has continued to be a serious problem due to the state strict sector control and lack of efficient monitory mechanism. The China's Supreme People's Procuratorate reported that between 1998 and 2003 there were 203,880 corruption cases investigated involving 13,854 officials and retrieved approximately $3.18 billion. In 2004, 43,757 government employees were investigated by prosecutors for corruption and dereliction of duty, of which 30,788 were brought to court. Xie and Lu (2005) examined China's corruption in financial institutions, and they found that customers of banking had to pay extra costs to bribe

banking officials for services. Bribes to officials given by foreign investors have tended to increase and have had an adverse effect on competition and fair resource allocation (Cole et al., 2009).

Corruption affects both the foreign firms and domestic firms, but domestic investors are better than foreigners in managing the transaction and coordination costs because of the familiarity in the local market (Habib and Zurawicki, 2001). Fung et al. (2004) prove that lower degrees of corruption play an important role in attracting higher inflows of FDI. Wei (2000a) shows that both corruption and tax rates have negative effects on FDI flows. Wei also presents corruption that is not transparent ultimately create more uncertainty over the total questionable payments or the final outcome. Consequently, the uncertainty induced by corruption leads to more constraints to foreign firms and decrease FDI inflows. In transition economies, Javorcik and Wei (2009) find corruption makes local bureaucracy less transparent and adds the business cost to the foreign firms. Hines (1995) also finds the foreign firms are more constrained by corruption as FDI from the USA grew faster in less corrupt countries than in more corrupted countries.

However, there are also different theoretical opinions. In a country with rigid regulations and inefficient bureaucracy, corruption may increase bureaucratic efficiency by speeding up the decision making process (Bardhan 1997). Fan et al. (2009a) find the exemption from corruption does not significantly affect FDI inflows. In other words, the foreign firms are not more constrained by the corruption. Several researches also support that corruption promotes private investment and private initiative and expands the tax base in China (Qi, 1992, 1994; McKinnon, 1992; Montinola et al., 1995; Qian and Weingast, 1996, 1997; Jin et al., 2005; Blanchard and Shleifer, 2000). In fact, the corruption constraints may not apply to all foreign investors equally because there is variability in the cost of engaging in bribery abroad (Curevo-Cazurra, 2006). Investors from countries that have laws against bribery abroad are likely to be more constrained by the corruption in the host country. In contrast, investors from countries with high levels of corruption appear not to be more constrained by the high levels of corruption. Among the studies of corruption in China, Cole et al. (2009) reveals that FDI is attracted to regions that have done the most to tackle corruption and that have the most efficient local government. Conversely, Chen (2004) considers corruption in local government to be consistent with the incentives to help the development of private sector as an increased private income expands the

local tax base. Thus, the private firms are apparently less constrained by corruption. To find how corruption constrains the business performance, there are two hypotheses:

Hypothesis 4 **(H4a)**: The foreign firms are more constrained by the constraints of corruption than the domestic firms.

Hypothesis 4 **(H4b)**: The private firms are more constrained by the constraints of corruption than the non private firms.

3.3.2.5 The legislation and constraints of legal institutions

Table 3.2 FDI legislations and regulations in China

Stage I (1979–1991)	Stage II (after1992)
✧ Equity Joint Venture Law (1979) ✧ Constitutional Law revision for FDI (1982) ✧ Wholly Owned Subsidiaries (WOS) Law (1986) ✧ Wholly Foreign-Invested Enterprise Law (1986) ✧ Provisions for the FDI Encouragement (1986) ✧ Constitutional Status of Foreign Invested Enterprises in Chinese Civil Law (1986) ✧ Interim Provisions on Guiding FDI (1987) ✧ Delegation on Approval of Selected FDI Projects to more Local Governments (1988) ✧ Law of Cooperative Joint Ventures (1988) ✧ Rules for Implementation of WOS Law (1990) ✧ Income Tax Law and its Rules for ✧ Implementation (1991)	✧ Trade Union Law (1992) ✧ Company Law (1993) ✧ Provisional Regulations of Value-added Tax, Consumption Tax, Business Tax, and Enterprise Income Tax (1993) ✧ Law on Certified Public Accountants (1994) ✧ Provisions for Foreign Exchange Controls (1994, 1997) ✧ Insurance Law (1995) ✧ Law of Commercial Bank (1995) ✧ Guideline for FDI (1995, 1997, 1999) ✧ Further Delegation for Approving FDI to Local Government (1996) ✧ Custom Administration Reform (1998) ✧ Regulation on Trial Operation of Foreign Banks in Shenzhen and Putong (1998) ✧ Law of Land Management (1999) ✧ PRC Contract Law (1999) ✧ Regulation Governing FDI to Domestic Commerce Sector (1999) ✧ Establishment of National Finance and Insurance Commissions (1999) ✧ Accession to WTO (2001) ✧ Closer Economic Partnership Arrangement with Hong Kong and Macau (2003)

Source: summarised from Tuan and Ng (2004)

A successful legal system is able to put the policies into operation properly, comprising political stability, transparent and accountable government, and the prevention of corruption, in order to attract and retain more investment (DFID, 1997). In China, the changes of legislation can be conceived of as a two-dimensional evolutionary process (table 3.2) (Ng and Tuan, 2001; Tuan and Ng, 2004). In the first stage, the reforms include "the relaxation of ideological constraints, revision of the constitution and efforts to provide legal status and legitimacy for FDI related activities in a socialist economy" (Tuan and Ng, 2004: 675). The second stage is aimed a full-

scale economic liberalization and marketization, and the major legal regimes have been progressively liberalized with important modifications to the laws governing the foreign firms. As a result, China accepts and implements the three basic legal concepts in its reform of legislations (Huang, 2003a): (1) the concept of "legal person" that indicates the independence of a firm; (2) the introduction of ownership and the associated benefit right from ownership; (3) the recognition that firms have a broad range of decision rights, especially the control right.

In China, while certain laws and regulations apply to business activities of foreign firms, others apply only to domestic businesses (Huang, 2003a). The dualist nature of legal system has already influenced basic issues such as company incorporation, corporate governance, contract, and tax. In order to better encourage inward flow of funds, technology and knowledge, China offers numerous preferential treatments to the FIEs in taxation (table 3.3), such as income tax reductions and exemptions. In addition, to develop local economy, local authorities usually extend the sector limitation of the FIEs to accept preferential treatments and give extra advantages combined with preferential treatments. Because the reforms in the Chinese legislation and legal institutions all aim to encourage FDI inflows and better FIEs operation, theoretically, the FIEs' business performance should be less constrained by the legal institutions than the domestic firms.

Table 3.3 Current differences of Tax Categories

Tax categories	Tax payer Tax	Tax scope	Tax rate
✧ Corporate ✧ Income Tax	✧ Levied on domestic financially independent enterprises and organizations.	✧ Based on taxable revenue.	✧ The general tax rate is 33%. ✧ If the taxable revenue is below RMB100, 000, the tax rate is 27%. ✧ If taxable revenue is below RMB30, 000, the tax rate is 18%.
✧ Foreign-invested Enterprises & Foreign Enterprise income Tax	✧ Levied on foreign-invested enterprises and foreign enterprises.	✧ Based on taxable revenue.	✧ The general tax rate is 33%. ✧ In special economic zones, the tax rate is 15%. ✧ The pre-paid tax rate is 10%.

Sources: Zuo (2006)

As a result, the legislative and regulatory treatments of domestic firms have been far less transparent and more restrictive, and the legal protection of foreign firms far exceeded that of domestic private investment. The state has made a legislative commitment not to nationalize or expropriate foreign investment without due cause and compensation while there is no similar protection for domestic private firms. This dualist nature of legislations is originally rooted in

the design and the approach of economic reform, as the initial purpose to maintain two legal systems was to use FDI to preserve socialism, instead of demolishing it (Huang, 2003b). Accordingly, a legal mechanism was designed in an attempt to preserve socialism and to control the reforming process and its influences, for the foreign firms. There is hence an internal logic between encouraging the foreign firms on the one hand and restricting domestic private firms on the other hand. As a result, the domestic private firms have to face more legal constraints.

Business performance is also linked with contract enforcement depending on legal institutions and law enforcement, as a fine legal framework is fundamental in the stability and flexibility for business operation (Du et al., 2008). The legal system includes all institutions and officials who are involved in creation and implementation of law, including courts and judges; bureaucrats; and politicians, in their capacity as makers and implementers of law (Perry, 2002). To have an effective law enforcement system, a country must have an independent and efficient judicial system with a sufficient supply of qualified legal professionals (Allen et al., 2005).

However, in China, the customary rules require an individual to obey rules drafted by community leaders over and above the laws. At an operational level, the limited authority of the courts presents a more basic issue. Courts are only parallel to, rather than superior to, other units of the Chinese bureaucratic hierarchy. The powers of the courts are subject to serious limitations because, although the reforms reconstructed them, they remain part of a state apparatus that still reflects the severe limits that the doctrine, structure and practice of the state places on the judiciary. When courts seek to enforce judgments, agencies whose actions are required to assist the courts sometimes refuse to cooperate. Furthermore, the decision-making behaviour of the courts is similar to other administrative agencies in China, and adjudication is seldom different from other bureaucratic processes. Judges are selected and paid by local governments, a relationship that leads to pressure on the courts to favour their localities in litigation involving foreigners and parties from elsewhere in China, consequently impeding fair adjudication and enforcement of judgments. Therefore, the power of local courts is impaired by local protectionism, which has a negative impact on the effectiveness of judiciary (Huang, 2003a). It is also reasonable to question the effectiveness of the contract enforcement as government values community benefits above private ones (Vu et al., 2008).

Beck et al. (2005) find that the foreign firms face lower legal constraints, while the non private firms face more legal constraints in their cross country study. The finding of Li et al. (2009) is

consistent with the research conducted by Demirguc-Kunt and Maksimovic (1999) that better legal protection is associated with long-term financing. In their research, financial constraints for the private firms are related to more legal constraints. Especially in a transition country, the performance of private firms is more constrained by the absence of legal institutions for the consistent protection of private property and for the enforcement of private contracts (Kornai, 1990a). Because the lack of status and legal protection of private firms leaves them vulnerable to much interference from government officials and the judiciary, the private firms are more constrained by legal obstacles in China (Ahlstromet al., 2003; Ahlstromet al., 2008; Peng and Luo, 2000). For non-state controlled firms whose shareholders do not enjoy political power, legal investor protection is negatively related to ownership concentration (Wu et al., 2009). In other words, the business growth of the private firms is more constrained by the legal obstacles. However, investigating contract enforcement, Cull and Xu (2005) express a different opinion that the private firms are not more legally constrained as the owners express greater faith in that their rights would be well protected by the legal system. To find the relations between legal constraints and the business performance, the two hypotheses are implied:

Hypothesis 5 **(H5a)**: The foreign firms are less constrained by legal constraints than the domestic firms.

Hypothesis 5 **(H5b)**: The private firms are more constrained by legal constraints than the non private firms.

3.3.2 The constraints on the firms with different size

The factor of firm size is an important variable taken into consideration in this research. Fawzy (1998) and Galal (1996) argues that the firms with different sizes, (i.e. small, medium and large) behave differently in the business environment as they display different capabilities. Large firms can have bigger access to infrastructures and information compared to medium and small size firms (Beck et al., 2000; Hellman et al., 2000a; Hellman et al., 2000b) and government rules and regulations may also be biased in favour of large firms (Schiffer and Weder, 2001). Moreover, since large firms are usually endowed with more financial resources (Rosner, 1968), the ability of firms to strengthen skills and knowledge and gain access to advancing technologies, depend on the firm size (Santoro and Chakrabarti, 2002).

Beck et al., (2008) finds that firm size plays an important role in explaining the business performance constrained by institutions. Their results indicate that small firms benefit from higher levels of property rights protection and use more external finance from banks and equity

markets, while finance from banking system and other government sources are largely used by larger firms. In a business environment characterised by weak institutional framework, the size of a firm is determined by state plan rather than by market forces in China as many large Chinese firms are a legacy of the old planning system. Even with the openness reforms, the FDI inflows and the implementation of the Foreign Invested Enterprises (FIEs) are still determined by regulations and laws issued by the Chinese government (Tuan and Ng, 2004). Therefore, firm size is directly linked to the setting up and business operation of a firm. The large firms, such as many State Owned Enterprises (SOEs) bailed by the government, lack competitive and entrepreneurial mind that directly lead to inefficiencies (Shepherd, 1972). As a result, most Chinese firms have an incentive to increase firm size as much as possible without considering efficiency (Zhou et al., 2002). Schiffer and Weder (2001) indicate that small firms are likely to face tougher obstacles in obtaining finance, accessing legal systems, or dealing with corruption. Beck et al. (2005) indicates the firms' perception of business constraints relates to firm size. On average, smaller firms report higher obstacles of financing and corruption than large firms. In contrast, smaller firms report lower legal obstacles than larger firms. The author summarises the hypotheses:

Hypothesis 6 **(H6a)**: The business constraints faced by the firms are positively related to the factor of firm size. That is, large firms face fewer problems in terms of formal institutional constraints than medium firms that in turn have fewer problems than small firms have.

Hypothesis 6 **(H6b)**: The business constraints faced by the firms are negatively related to the factor of firm size. That is, large firms face fewer problems in terms of informal institutional constraints than medium firms that in turn have fewer problems than small firms have.

3.4 Summary

This chapter outlines the two steps in outlining conceptual framework to study the aims and objectives of the research. The first step is to investigate the impact of institutional factors on insider and outsider firms in China. The second step is to answer the questions about how the formal and informal institutional constraints influence the business performance differently. There are totally six main hypothesises. Among the business constraints discussed in this chapter (table 3.4), corruption is the representative of informal institutional constraint, while the formal institutional constraints include financial system, legal system, business competition, rules and regulations. In chapter 4, the author pays more attention and more emphasis on the institutional issues in China, to discuss the role of institutions in influencing the process of changes of the institutions and subsequently impact on the business performance.

Table 3.4 Institutional indicators

Institutional factor	Theoretical sources in the literature	Examples of previous studies
Corruption	Curevo-Cazurra (2006); Kaufmann et al. (2003); Mauro (1998); Sun (2004); Shleifer and Vishny (1993)	Blanchard and Shleifer (2000);Fan et al. (2009a); Fung et al. (2004); Habib and Zurawicki (2001); Hines (1995); Javorcik and Wei (2009); Jin et al. (2005); McKinnon (1992); Montinola et al. (1995); Qi (1992, 1994); Qian and Weingast (1996, 1997); Wei (2000)
Financing	Foley et al. (2004); Huang (2003); Levine (1997); Park and Sehrt (2001 Hericourt and Poncet (2009); Zhao (2003)	Beck et al. (2005); Forssback and Oxelheim (2008); Firth et al. (2008); Guariglia and Poncet (2008); Hericourt and Poncet (2009); Li et al. (2009)
Court	Allen et al. (2005); DFID (1997); Du et al. (2008); Perry (2002)	Ahlstrom et al. (2003); Ahlstrom et al. (2008); Beck et al. (2005); Cull and Xu (2005); Demirguc-Kunt and Maksimovic (1999); Kornai (1990); Li et al. (2009); Peng and Luo (2000)
Business competition	Kornai (1979, 1980, and 1986); Luo (1995); Mahatoo (1990); Shleifer and Vishny (1994)	Du et al. (2008); Wang et al. (2008); You and Katayama (2005)
Rules and regulations	Acemoglu and Johnson (2005); Corne (1995); Fan et al. (2007); Van Stel et al. (2007)	Javorcik and Wei (2004); Kinoshita and Campos (200 Udayasankar and Das (2007); Van Stel et al. (2007); Wieneke and Gries (2011); Zhang and Fu (2008)

Chapter 4: Institutions and the firms' business performance with the FDI inflow and the private ownership in China

4.1 Introduction

This chapter highlights the economic growth in China, covering the connections between institutions, FDI and the firms' business performance. In this chapter, the author reviews the effects of the formal and informal institutions on the business performance of firm, such as laws, regulations and corruption. In the second and the third sections, based on the NIE, the author reviews the relations between the institutions, business performance, the main economic developments and the growth of the Chinese economy since the 1980s. The fourth part displays the changes in the institutions along with the reforming policies in China. The fifth section reviews the institutional changes and their influences respectively. This includes the external aspect of internationalisation through FDI inflows and the internal aspect of ownership change. Given the influences of the introduction of FDI and private ownership, the author explores the different aspects of institutional framework in China, consisting of institutional constraints, institutional changes, and the problems in the existing institutions.

4.2 The institutions and the firms' business performance

According to North (2003), the general economic environment is characterized by uncertainties, and those uncertainties stem primarily from human interaction and the human environment. "The structure we impose on our lives to reduce uncertainty accumulates from prescriptions and proscriptions, which produce a complex mix of formal and informal constraints embedded in language, physical artefacts, and beliefs. …… The dominant beliefs, that is, of those political and economic entrepreneurs in a position to make policies, over time result in the accretion of an elaborate structure of institutions, both formal rules and informal norms, that together determine economic and political performance. The resultant institutional matrix imposes severe constraints on the choice of entrepreneurs when they set out to create new or to modify institutions in order to improve their economic or political positions…….Change is continually occurring, although the rate of change will depend on the degree of competition among organizations and their entrepreneurs. Entrepreneurs enact policies to improve their competitive positions, resulting in alterations of the institutional matrix" (North, 2003: 2-3). Along with the economic development, the difficulties in enforcing agreements increase transaction costs. The transaction costs arise also because the exchanging parties hold information costly and asymmetrically. Accordingly, it is necessary to build a more complex institutional structure to

permit anonymous, impersonal exchange across time and space. As North (1993c: 5) mentioned, "To overcome them entails the creation of institutions that so structure the rules and their enforcement as to alter the pay-offs to induce cooperative solutions". That is, the institutions are designed to achieve efficient operation by reducing uncertainties caused by transaction cost. According to the NIE, both the formal and informal institutions work together to influence the entrepreneurs' decisions and ultimately determine the business performance in the institutional matrix. Institution is therefore the fundamental determinant of the efficiency of the firm and resource allocation in a modern market economy.

According to Hare (2001), institutions are characterised by public goods. As the "supply of institutions" generated by the market mechanism does not efficiently keep up a correspondence to the social level, "there is evidently a role for the state both in creating institutions which the market does not provide and regulating in the public interest those which it does" (Hare, 2001: 6). Coase (1937) furthermore writes the substitute relation between transaction cost and the operation of a firm. He notes that the format of firms is to replace markets in order to gain the efficient management, when the cost of internal management is smaller than transaction costs across the market. The comparison between these determines the decision regarding the organisational management within a firm against business behaviour through market (Demsetz, 1988).

"In a world where it was costless to think about, plan for, and write down provisions for future events, parties engaged in trade would write a comprehensive contract which specifies precisely what each of their obligations is in every conceivable state of the world. Under these conditions, there would never be any reason for the parties to modify or update their contract since everything would be anticipated and planned for in advance. Nor would any disputes ever occur since an outsider could determine whether one of the parties has been in breach of contract and impose an appropriate penalty" (Hart, 1988: 121-122). Therefore, the contractual relation is the essence of the firm, with employees, suppliers, customers, and creditors, etc. The firm acts as the framework including a set of contracting relationships among individuals. The principal engages the agent under a contract to perform a service on their behalf by giving authority to the agent. However, the problem of agency costs and monitoring independently exists for all of these contracts. As transaction costs are large in practice, the presence of transaction costs indicates that it is impossible for the parties to write a contract that anticipates all the problems and the appropriate actions related. It is hence generally impossible for the principal or the agent

at zero cost to ensure that the agent will make optimal decisions from the principal's viewpoint (Jensen and Meckling, 1976). When contracts are incomplete, the importance of a proper ownership structure emerges in order to reduce the transaction costs and to maximise the profits of the firms.

Business growth usually involves an expansion in terms of assets and employees, an increase measured by sales and profit levels, or generation of new products and services (Peng and Heath, 1996). This growth depends on the role of the entrepreneurs to make decisions by the managerial and organizational capabilities (Eisenhardt and Schoonhoven, 1990; Penrose, 1959). At an inter-organisational level, a firm's business operation is constrained by its efforts to reduce the uncertainties by employing all the necessary resources (Pfeffer and Salancik, 1978). Again, the firm's business success and operational failure depends on the amount of transaction costs of inter-organisational relationships, subject to the partners' trust and understanding to smooth the potential problems (Browning et al., 1995; Powell, 1990).

Strictly speaking, a firm is "one form of legal fiction which serves as a nexus for contracting relationships and which is also characterised by the existence of divisible residual claims on the assets and cash flows of the organization which can generally be sold without permission of the other contracting individuals…… There is in a very real sense only a multitude of complex relationships (i.e., contracts) between the legal fiction (the firm) and the owners of labour, material and capital inputs and the consumers of output" (Jensen and Meckling, 1976: 311). Any strategic choice of a firm is rationally affected by the institutions (Oliver, 1991), and the firm have to face the pressure coming from the formal and the informal institutions as a set of systems (Meyer and Rowan, 1977; North, 1990; Powell and DiMaggio, 1991). The firm operates within and is constrained by a given institutional framework that decides transaction costs and controls resource allocation (Xu and Li, 2001). In other words, "organization and environment permeate one another both cognitively and relationally" (Child, 1994: 12). From this perspective, modern organisation reflects both its institutional past and its present situations (Shenkar, 1996), and "industrial enterprise is a complex modern adaptation of pre-existing patterns of domination to economic situations in which profit, efficiency and control usually from the very conditions of existence" (Hamilton and Biggart, 1988: 54).

Based on the discussion above, we can conclude that institutional constraints limits business performance (Peng and Heath, 1996). However, in an economy with problematic institutions,

the absence of marketing function applies two more constraints on firms (Brauw et al., 2002). First, when transaction costs rise due to institutional constraints that limit market-based exchange under infant markets, the firms are unlikely to change the allocation of their resources. Even given the information of price change, the entrepreneurs are not sensitive enough to make a proper business decision. When we look at the economic development in China, from the beginning of the 1980s, all reforming efforts were aimed to remove the inefficient institutions and replaced with better ones. This includes the development of a market mechanism in the economy, the introduction of the idea of entrepreneurs to the firms, changes in the laws, business regulations and economic policies. In the next part, the author is going to talk about the problematic characters of institutions in China and the problems related to the business performance of Chinese enterprises.

4.3 The institutions in transition and the firms' business performance

Table 4.1 Two features of communist systems giving non-system co-operation

Market	Intermediate goods	Consumer goods
Agents	Firms	Households
Feature	Plan fulfilment pressures and slowness of planning apparatus	Supply constraints causing queuing and quality problems
Reaction	Fixer and barter networks. Often large-scale deals.	Shopping and barter networks. Premiums on good connections.
Legality	Grey, often tolerated. Often close to corruption	Partly legal or moderately grey. Sometimes close to corruption.

Source: Nove (1977)

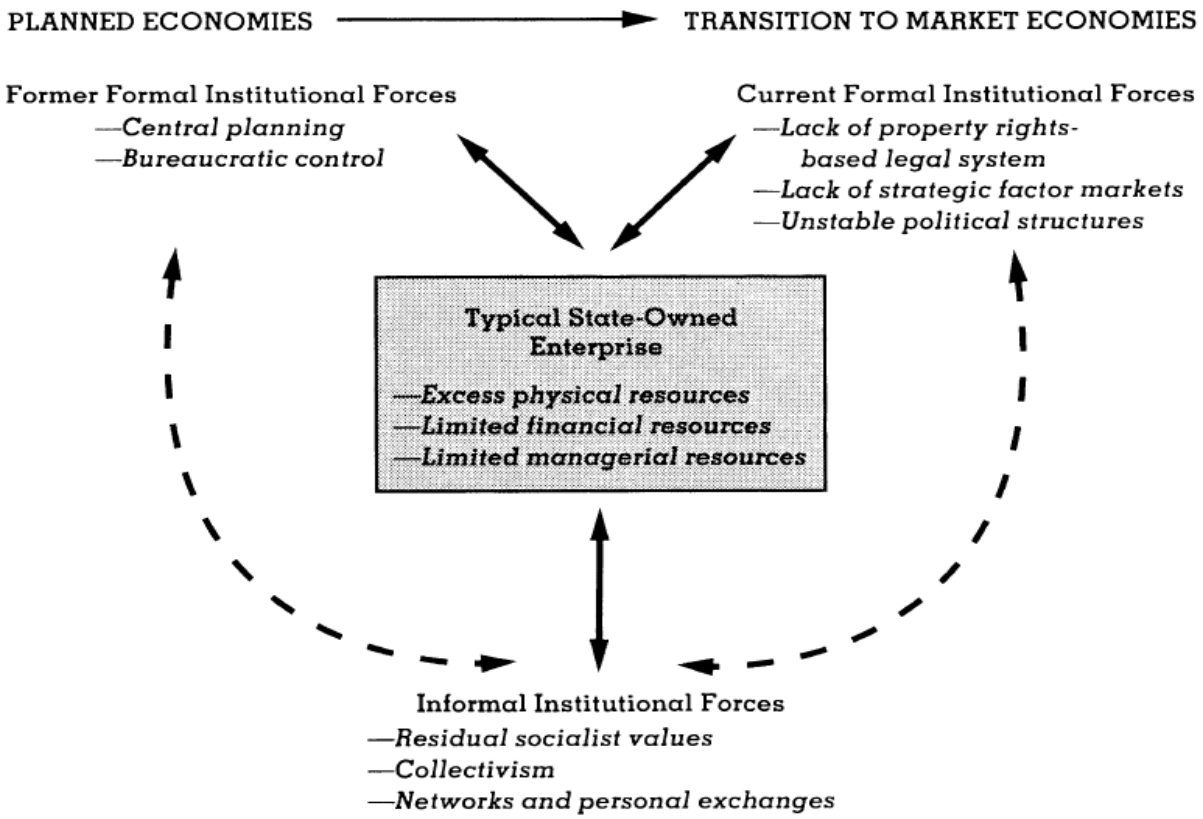
Scott (2001: 65) presents four principles that characterise a Communist system:

- Party control over management, including economic decisions at all levels
- Use of mass methods, such as production campaigns
- Militarization of management, including the use of military terms and approaches
- Worker education, in areas including Marxist-Leninist ideology, and work attitudes

Nove (1977) summarise two features of the communist economic system, named supply constraints and plan fulfilment pressures (table 4.1). In this economy, the households were supply-constrained, and the firms are to fulfil plan targets made by official channels. It is logically impossible to value the true costs of goods and services as the costs are irrelevant in making decision. When people have the right to distribute goods and services, they often care

little about the costs, so values for goods and services vary and differ from the true cost structure (Paldam and Svendsen, 2001). Obviously, under the control of the Communist Party, the institutional networks are inefficient, and the connections between firms were grey and often corrupt (Paldam and Svendsen, 2001). Accordingly, a firm that lacks abilities to acquire and allocate resources is less competitive (Child, 1990; Lawrence and Vlachoutsicos, 1990).

Graph 4.1 The interaction of institutions and organisations in the economy of transition



Source: Peng and Heath (1996)

Stiglitz (1997: 15) notes there are "...special problems facing developing and transition economies, in which markets are lacking; the markets that do exist may function less effectively, and information problems are more severe than in industrial countries simply because of the rapid change in the economic environment". Peng and Heath (1996: 504) summarises three characteristics of the constraints of the formal institutions, which are "lack of a property-rights-based legal framework, lack of a stable political structure, and lack of strategic factor markets. Overall, these formal constraints are characterized by extreme volatility and unpredictability, which …… have a strong bearing on the strategic choice of the firm for growth". Graph 4.1 exhibits the institutional framework in the transition economies in which the

firms survive, and the most fundamental feature is the complete use of central economic planning and bureaucratic control with the overwhelming effect on the business performance. Before the transitions, "a national plan was developed by the central government and then was incrementally decomposed into a set of targets and orders for specific (state-owned) firms" (Carroll et al., 1988: 235). Instead of being an independent decision-making unit, the firm taking order from the planning regime has little incentive to improve its business performance.

"Although formal rules may change overnight as the result of political and judicial decisions, informal constraints embodied in customs, traditions, and codes of conduct are much more impervious to deliberate policies" (North, 1990: 6). In transition, the formal constraints in the planning regime are weakened, and the new formal constraints toward a market-based economy are not entirely set up. Hence, pre-existing networks of affiliation are activated, and network ties become more important, acting as the constraints of informal institutions (Nee, 1992; Peng, 1994). Regarded as a set of dominant logic that shapes the institutional frameworks (Prahalad and Bettis, 1986), the informal institutions are able to present some essential constancy and predictability of the change in the formal institutions, by reducing uncertainties. For example, "To operate with any degree of predictability, firms must be able to take and place orders, arrange the future delivery of goods and services, and seek and provide warranty" (Fafchamps, 1996: 444). There are two main ways of dealing with risk-sanctions and trust. When successful, this predictability becomes a strong expectation of a "taken for granted" character and greatly facilitates transaction (Humphrey and Schmitz, 1998). If contracts cannot be enforced, firms have to build up personalised trust relationships to sustain the exchanges (Fafchamps, 1996). In other words, they both increase the predictability in a transaction, and the informal constraints therefore play an important role to regulate economic exchanges and influence the business performance.

Transaction costs of enforcing contracts are usually high in a transition economy (Choi et al., 1999). This is mainly due to the presence of three types of imperfections in the institutions (Che and Qian, 1998a: 9-10). "First, state institutions are imperfect … due to a lack of the rule of law and institutions that constrain the state from arbitrary revenue expropriation. …… there is no independent judiciary system: the parliament, executive branch, and courts are all under the control of the Party. Therefore, there is no law or institution-based commitment……, the state has the ultimate authority for …… enterprises and lower level governments. This creates serious commitment problems which can distort investment incentives". Second, the capital market is

under developed. “As investor may also be unable to force the entrepreneur to take an appropriate action, entrepreneurs find it difficult to raise capital, and many investment opportunities pass by without financing”. Third, the government controls the SOEs and banking system. “The central government can order a state bank to provide funds to a state enterprise and to order the central bank to print money whenever it appears necessary”. Accordingly, the government is responsible for the business inefficiency and the investment failures (Kornai 1980; Dewatripont and Maskin 1995).

Socialist state ownership means the complete control of property, and it is impossible for the communist party to consider any options about transferring property rights to others (Kornai, 1990b). “There were too many barriers: the ideology of state ownership; the power structure of the party, based heavily on state-enterprise managers and bureaucrats loath to allow real competition to the state enterprises; the communist leaderships’ lack of legitimacy among the public, making it impossible to impose the short-run costs of deep economic restructuring” (Lipton and Sachs, 1993: 34). In reality, “there is …a…contradiction in the whole reform process: how to get the active participation of the very people who will lose a part of their power if the process is successful” (Kornai, 1986b:1729).

He (2000: 244-245) stated “leaders of public institutions use their institutional power to increase the revenue of their institutions and improve the welfare of their staffs through various legal, semi-legal and illegal ways. Such practices include public institutions making profit by engaging in business activities (such as a public bank entering into the stock market, or the bureau of environment protection selling environment protection facilities to their clients), setting up satellite companies, and imposing fines or collecting administrative fees or charging the so-called ‘service fee’ and then putting the income into their own coffers … … Such ‘unhealthy tendencies’ and the associated corruption, both significantly increasing the cost to the public, have led to a significant public outcry”. This has led the Chinese authorities make efforts to stop these practices. However, “A reform reduces the power of the bureaucracy by definition, and most of the administration will inevitably oppose reform. Therefore, a successful reform must break the power of the party and state bureaucracy might be seen as the key problem of a reform” (Aslund, 1991:14). When the private ownership was introduced in the socialist China in the 1980s, for the first time, owners and managers are responsible “for the full range of business decisions and for the financial benefits and costs of those decisions” (Borenzstein and Kumar, 1990: 230). Private property provides the only means for owners to

"monitor, assess, and control the performance of the managers effectively running the enterprises" as private property provide incentives for managers to minimize costs and respond to market signals (Borenzstein and Kumar, 1990: 229). The reform should include an anti-communist revolution in the beginning and the economic liberalization afterward (Nolan and Wang, 1999). The transition should comprise anti-bureaucratic revolution, privatization, closure of the large scale SOE sector, and globalisation. This reform is principally a necessary movement from the communist bureaucracy toward a market economy as foreign capital will not favour a communist bureaucratic country.

4.4 The reform in China and the firms' business performance

Unlike most other transition economies, China has adopted a dual-track system in which market forces are introduced but the government still plays a very important role in resource allocations (Li and Xia, 2008). Park et al. (2006) suggest that firm performance in China is affected by three institutional changes----decentralization, privatization, and targeted industrial policy. The institutional changes shape managerial incentives and operation efficiencies, and in turn influence the business performance. Partly due to institutional weaknesses and partly due to the political desire to control, state regulations, and policies still interfere with the market and tend to favour certain industries or firms. These institutional weaknesses affect the market structure and firm performance in terms of firm status, resource access, and strategy. Old institutions linger and new institutions are not effectively and efficiently enforced. As a result, the newly established laws are not taken seriously by officials, citizens, or firms. The legal enforcement tends to favour government officials or firms that have good connections with the officials (Li et al., 2004). Under such circumstances, firms must seek unique and scarce resources to gain competitive advantages (Meyer et al., 2004; Xin and Pearce, 1996). In the following sections, the author tries to explore these different aspects related to these reforms.

4.4.1 Openness reforms and the institutional changes

The institutional changes in China are closely connected with the openness reforms that started in the 1980s. Before the 1980s, China had no foreign investment from non-Communist nations. Under its Marxist governance, any words and behaviours connected with market, private ownership, or free competition were made illegal although they are both elementary issues for efficient business operation. To achieve this and to bring necessary market reforms, the Chinese government resorted to reforms from outside to avoid the risks from the Maoist control and to overcome the internal obstacles to improve business operation. As a result, the Chinese

government chose international connection in order to kick start and initiate the process of economic reform. In the beginning of 1980s, China began its reform along with the application for the membership in the General Agreement for Tariffs and Trade (GATT) (which became an integral part of the World Trade Organisation (WTO) in 1995) (Norlan and Wang, 1999). Apart from the economic gains connected with the openness (McGrattan and Prescott, 2009; Tsui et al., 2004), the WTO negotiation and accession were able to make business operation more efficient through its integration with the global economy and standardization of management and regulations to an international level (Morgan, 1999; Shafaeddin, 2002). As the WTO is a rule-based international organization, China apparently adhered to all WTO rules and ensures conformity of its domestic laws and regulations to those of the WTO's. The legal instruments around the WTO accession set forth not only its market access commitments but also a number of provisions stipulating the rules under an international mechanism. The change in the central legal principles in China is thus one of the most important impacts. The rules not only cover trade in goods, services and intellectual property, but also govern investment, competition policy, trade facilitation, and transparency in government procurement. China's policies and regulations accordingly become more transparent and accountable, creating a favourable and fair environment for investment. When the WTO membership enshrined China's commitment to a certain set of policies, a change against these agreements has not only domestic ramifications in China, but also constitutes a breach of international commitments (Simmons, 2000). For instance, there are several disputes between China and the US based on the WTO mechanism (in table 4.2.1), and mostly China has to alter the barriers of its policies and regulations against the commitments related to the Chinese WTO accession.

The importance of the process of economic openness to the institutional changes lies in the Communist governance in China, in its closed economy, and in its under-developed institutions. Given the difficulties with the largest less developed Communist economy, the initial movement toward openness is the key to start the engine of the economic growth in China. The opening market access increases the inflows of foreign goods and investments while heightening the level of competition. Indeed, the openness reform is related to the strategy of using international obligations as a lift to push forward the Chinese internal domestic reform and relying on increased international competition to induce domestic firms to improve their efficiency. Increased competition is seen as an additional source of pressure on domestic enterprises, forcing them both to undertake badly needed structural reforms (Kong, 2004).

Table 4.2.1 U. S. WTO Disputes against China in 2011

China – Market Access for Books, Movies and Music
Initiation: April 2007 Dispute: The United States challenged China's barriers to importing and distributing books, newspapers, journals, theatrical films, DVDs and music in China. Third Parties: Australia, the EU, Japan, Korea and Chinese Taipei Status: A WTO panel issued its decision in August 2009, ruling in favor of the United States on all significant claims. China appealed the panel's decision in September 2009. The WTO's Appellate Body rejected China's appeal in December 2009. China agreed to come into compliance with the WTO's rulings by March 2011. Since then, China has taken compliance steps with regard to the market access barriers on books, newspapers, journals, DVDs and music, but not theatrical films.
China – Export Restraints on Raw Materials
Initiation: June 2009 Dispute: The United States, the EU and Mexico are challenging China's export restraints on several key raw material inputs used to produce downstream products in steel, aluminium and chemical sectors around the world. Third Parties: Argentina, Brazil, Canada, Chile, Colombia, Ecuador, India, Japan, Korea, Norway, Saudi Arabia, Chinese Taipei and Turkey Status: A WTO panel issued its decision in July 2011, rejecting China's defences and finding in favour of the United States and its co-complainants on all significant claims. China appealed the panel's decision in August 2011. The WTO's Appellate Body is expected to issue its decision in 2012.
China – Electronic Payment Services
Initiation: September 2010 Dispute: The United States is challenging China's restrictions on foreign suppliers of electronic payment services like the major U.S. credit card companies. Third Parties: Australia, Ecuador, the EU, India, Japan and Korea Status: Hearings before a WTO panel took place in October and December 2011. The panel is scheduled to issue its decision in 2012.
China – Antidumping and Countervailing Duties on Grain-Oriented Electrical Steel
Initiation: September 2010 Dispute: The United States is challenging China's imposition of antidumping and countervailing duties on imports of grain-oriented electrical steel from the United States. Third Parties: Argentina, the EU, Honduras, India, Japan, Korea, Saudi Arabia and Vietnam Status: Hearings before a WTO panel took place in September and December 2011. The panel is scheduled to issue its decision in 2012.
China – Import Substitution Subsidies in Wind Energy Sector
Initiation: December 2010 Dispute: The United States challenged what appeared to be prohibited import substitution subsidies being provided by the Chinese government to support the production of wind turbine systems in China. Third Parties: Other WTO members did not have an opportunity to join in as third parties before this dispute was resolved. Status: Consultations were held in January 2011. Following consultations, China repealed the measures at issue.
China – Antidumping and Countervailing Duties on Chicken Broiler Products
Initiation: September 2011 Dispute: The United States is challenging China's imposition of antidumping and countervailing duties on imports of chicken broiler products from the United States. Third Parties: It is not yet clear whether other WTO members will join in as third parties. Status: Consultations took place in October 2011.

Source: United States Trade Representative (2011)

The international institutions affect the incentives that governments face when choosing between alternative policies. Openness and cooperation with international institutions lead to

increased monitoring and the gathering and dissemination of information about non-compliance with institutionalized commitments, which facilitates punishment by foreign governments, domestic and foreign private actors, through mechanisms established in the context of creating the institution. They change the relative cost of policy choices, making some more costly than they would be in the absence of the institutions (Keohane, 1989). Violating one's internationally institutionalized commitments might cause reputation loss, which adds to the long-term cost, beyond the more immediate economic and political costs incurred as punishment or retaliation. These prospects of such costs create political and economic incentives for governments to minimize reneging on the commitments that are enshrined in an international treaty, which in turn should make these commitments more credible and reliable. In practice, governments who want to attract further FDI therefore have a long-run economic incentive not to violate the trust of current foreign investors (Tomz et al., 2004).

Due to the strict protection in China in the beginning of the 1980s, FDI inflow and the FIEs connected should be the unique way to gain access to the market as they created tangible or intangible assets of competitiveness, such as "the stock of physical assets, technological know-how, goodwill, the learning and interpersonal relationships forged by individuals, and the cultures and organisational structures of institutions" Dunning (1993: 190). Krasner (1982: 186) also noted international agreements embody "principles, norms, rules … around which actors' expectations converge". The participation in institutions that commit a country to economically liberal policies toward international trade and finance should contribute to a general reputation for the liberal economic policies that make a country a good location for FDI. In China, domestic business operation is still subject to political constraint, even after the government makes a commitment to a liberal economic policy. However, there are strong incentives to maintain the reforms and reduce redistributive intervention, so as to obtain the full benefits from liberalization in international cooperation (Frieden and Rogowski, 1996). In addition to these economic incentives to boost economic growth, there may be political incentives for governments to combine liberal foreign economic policies with liberal domestic ones, as the economic success of the FIEs who are guaranteed liberal treatment strengthen those in the domestic economy who seek to maintain and increase liberal policies toward all economic players.

4.4.2 The institutions and the firms with state ownership

An SOE is legally owned by the 1.3 billion Chinese people, and the real control rights are handled by the central/regional government and their industrial bureaux. As state ownership implies that it is impossible for these firms to operate independently and to avoid governmental intervention (Groves et al., 1994), transaction costs become less important to the firms as they can ask for compensation from the state for their losses (Boisot and Child, 1988). These firms are financially protected by the national fiscal system (Guthrie, 1997). Social disturbance, especially the unemployment pressure, makes the government unable to harden the budget system and eliminate fiscal support. In China, an SOE has never been a pure economic actor with many other social and political functions, and the heave social burden may be one dominant factor undermining the economic efficiency of SOEs. The increasing weight in supplying a large set of public goods has severely prevented the development of SOEs (Perotti et al., 1999). In addition, many new projects that are typically established by local governments or industrial ministries often become new sources of loss. The failures of these projects are due to China's state investment system, characterised by bureaucratic co-ordination (Sun, 1998). Under this system, managers are not very cost-sensitive. Inevitably, described with long lasted market imperfections under previous planning regime, this transformation is determined by the market force but accompanied with governmental intervention, especially the use of fiscal levers, such as subsidies (Luo, 2002). Correspondingly, the state has to bear the losses made by SOEs, through either direct subsidies or the state bank system, named the soft budgeting system (Walder, 1992).

When the reform started in the 1980s, the initial condition of the institutions is a centrally planned system with the dominating public ownership, and central decisions distribute goods and services through a vertical hierarchy (Polanyi, 1957). This system is a structured centricity of economic transactions, and the firm with state ownership operates as an appendage of the state, responding to commands sent. During the transition, the hierarchy of the classic economy is replaced by market dependence and the horizontal market transactions increase as the firm more and more depends on market exchange. Along with the marketisation reform, the traditional advantages belonging to the SOEs have gradually diminished. However, the SOEs still make a large contribution to the government revenue. For example, by 1995, the SOE sector produced about 44% of GDP, but contributed 71% of national fiscal revenue (SSB, 1997). Displayed in table 4.2.2, although the share of the firms with state ownership decreased steadily, the industrial contribution of these firms is still more than 45% in 2007.

Table 4.2.2 The industrial contribution of the firms with state ownership

Unit: 100 Million yuan at current prices	Gross industrial output value	Gross industrial output value of the firms with state ownership	Share (%)
1994	70176	56449	80.44
1995	91894	69351	75.47
1996	99595	72058	72.35
1997	113733	78958	69.42
1998	119048	80926	67.98
1999	72707.04	50508.25	69.47
2000	85673.7	56988.7	66.52
2001	95449	59467.2	62.30
2002	110776.5	65366.3	59.01
2003	142271.2	76933.2	54.08
2004	187220.7	97475	52.064
2005	222315.9	105472.9	47.44
2006	316589	149272.6	47.15
2007	405177	183525	45.30
2008	507285	N/A	N/A
2009	548311	N/A	N/A
2010	698591	N/A	N/A

Source: China Statistical Yearbook.

Note: N/A---No official data is available after 2007.

Originally, the economic reform seeks to increase productivity by introducing the elements of market-oriented institutions into China, and the government moves away from the direct corporate involvement by using its ownership and control, to privatization, corporatization, and securitization (Qian, 2001). In a stage from redistribution to market coordination, China improves incentives for direct producers, stimulates the growth of private markets, and provides entrepreneurs with an alternate path for socioeconomic mobility (Child, 1994b). The Chinese firms are only quasi-marketized during economic transformation (Nee, 1992), and they are still constrained by hierarchical and market institutions. (Peng and Heath, 1996). The reform involved the decentralization of power to the enterprise and local government, and its aim was to overcome administrative problems associated with central planning and to support and pursue market-oriented economic development. The close interorganizational relationship between enterprises and government is actually based on both the structure of property rights and the bilateral dependency. First, the SOEs have to rely on the connections with local government to secure business resources and credit needed, and governments fiscally depend on revenues from the SOEs. Second, the connection between the SOEs and government cut down transaction costs when the institutional arrangements toward marketing operation are weak. In the absence of contractual law, enterprises need political assurance reduce transaction costs in contract

negotiation and enforcement, particularly for compensation. Government backing may also fulfil the terms of the business contract in a timely manner (Nee, 1992).

In theory, separation of ownership and control of finance and management is likely to lead to agency problems, in the context of self-interested managerial behaviour that imposes agency costs on the firm or on the absentee owners' welfare. A multiple series of principal-agent problems exist in the SOEs because of the conflicting roles assigned to the managers and to the supervising bodies, and by the fact that SOEs' assets are similar to public goods (Jefferson, 1998). The state assumes the role as representative of the people and acts as the principal on behalf of the public, but the controlling authorities who exercise state ownership rights over SOEs do not bear any risks over the control and use of an SOE's assets. Officials are unaware of profitability, and they do not have sufficient incentives to preserve and increase the value of the firms. Such systemic features as soft-budget constraints, the lack of independent financial accountability and the impossibility of bankruptcy, undermine the incentives and disciplinary mechanism essential to corporate governance of SOEs (Qiang, 2003).

A widely implemented contract obligation system increases managerial discretion, and reduces the bureaucratic costs embedded in hierarchical firms. In the contract for the SOEs, governmental authorities set the financial and operational goals. The general managers are given profit sharing in terms of economic rationality and managerial discretion (Guthrie, 1997). Nevertheless, in the absence of a rule of law and an independent judicial system, acting as the enforcer of a contract, government may be a party of the contract. Therefore, contracting is likely to be incomplete due to imperfect institutions, and an enforceable contract may become unenforceable in developing and transitional economies (Che and Qian, 1998b). Apparently, managers of SOEs were given specific control rights in production, investment, sales, profits, personnel management, and distribution of fringe benefits via contracts, therefore managers have partial incentives to generate cash flows and expand wages in the form of bonuses and fringe benefits. However, the contractual relationship between managers and the government was asymmetric and incomplete. The state, in fact, remained responsible for final losses, mainly through the state-owned banks, which were not contractual parties in the contractual relationship between enterprise and government. As a result, profitability is not management's priority and the firms continue to act as government agencies or social security institutions providing welfare services to employees instead of perusing profit-maximizing businesses (Su, 2005).

China starts its transiting reforms by commercialising some SOES as managers are more concerned with profits than politicians are (Boycko et al., 1996). However, the extent that SOEs' commercialism ultimately leads to more productivity, it is also limited by agency-cost problems. In the absence of complete and fully enforceable contracts, principal-agent problems arise because owners (principals) want to maximize firm value while managers (agents) maximize their own utility, which in general reduces the value of the firm. When government is also an actor, the involvement of government may call for the cut of benefits that might belong to either principals or agents. These interrelationships become complex because of conflicting goals: politicians, civil employees, and citizens themselves (Hart, 1995). In transition, Grossman and Hart (1986) and Hart and Moore (1990) additionally argue that residual rights of control, not confirmed by contracts, are critical determinants of managerial incentives. Shleifer and Vishny (1994) also argue that reform without allocation of residual rights to management is unlikely to guarantee more productive or profitable operation. Moreover, it is unlikely to enhance productivity when government can still indirectly subsidize management to maintain political and social objectives through control over transfers from the treasury, in terms of a soft budget constraint. Subject to strong political influences to maintain SOE's social responsibilities, managers of the SOEs have minimal rights to control the state assets and have little interest in technology investment, profit maximization and efficient resource allocation, which inevitably led to high costs of government interference.

Several factors can lessen agency costs of managerial discretion, such as debt, takeover threats, legal protection of owners, market competition, etc. Jensen (1986) and Stultz (1990) show that debt with the threat of bankruptcy imposes a hard constraint on managers and limits management's control over firm's operation, which reduces agency costs of managerial discretion. Shleifer and Vishny (1986) show if a company is badly managed, then there is an incentive for someone to acquire a large stake of the company, improve its performance and profit on the shares purchased. The threat of such action can persuade management to act in the interest of shareholders. Weisbach (1988) shows that the level of investor protection is negatively related to agency costs and positively related to firm performance. Maksimovic and Titman (1991) argue that product market competition makes profits more sensitive to managerial effort, reduces agency costs and enhances investment efficiency.

In China, a firm with state ownership has major disadvantages. Having political objectives rather than economic ones matters a great deal. Governments are not motivated by profit as

private owners are. However, as the market institutions are imperfect and the changes will take some time, there are reasons for governmental involvement in the transition. For example, state ownership may still be more successful than private ownership when there is a lack of rule of law in securing property rights, a lack of a functioning capital market, and a lack of adequate taxation and fiscal institutions. Although the privatization generally increases competition, state ownership is still necessary to solve some economic issues, i.e. a lack of a social safety net, a lack of legal framework for corporate governance, and a lack of regulatory institutions for financial industries. Chang and Wong (2003) find that the decision-making power of local Party committees relative to the largest shareholders is positively associated with firm performance, indicating that political control may help improve business performance through the mitigation of large shareholders' agency costs. On the other hand, the decision-making power of local Party committees relative to managers is negatively associated with firm performance, suggesting that the existing political control is excessive from the perspective of managers. Overall, they find that reducing political control tends to improve the performance of listed firms.

In a statistical analysis, Xu et al. (2006) found the reformed SOEs and newly formed private firms to be more competitive than the SOEs. After 20 years of reform, the various types of firms transformed from the former SOEs have achieved evidently better performance than the unreformed SOEs. It is also the first time that the positive profit outcome of reform in China has been reported on a nation-wide scale. Wei and Wang (1997) use the Wilcoxon test to examine the connection between the state-owned banks and state-owned industrial enterprises. They find evidence that banking lending is biased in favour of SOEs as cities with a higher SOEs' share in output are more likely to receive a rapid growth in bank loans. According to their research, the banking system and its lending policy have to be reformed to enhance the industrial reforms in China. Chen and Feng (2000) find that the share of SOE negatively affects the country's economic growth. High growth is caused by the non-state-owned enterprises. Instead of trying to support and reconstruct this inefficient sector, the expansion should be connected with new small and medium-sized enterprises with high tech (Blanchard et al., 1991). Nevertheless, in China, the initial conditions had long-lasting effects, not only because they were difficult to change, but also because government policies and other institutions tended generally to foster their persistence (Engerman and Sokoloff, 2002: 63-64). For example, although the public services provided by the SOEs prevent the efficient operation, traditional Chinese family values

and employment pressure may have strengthened such welfare obligations and making them difficult to change.

To overcome the barriers in reform, the integration into the international economic system can improve the firms' performance. "The vision is of one large inter-linked network of producers and consumers plugged into an efficiently operating level playing field of the open international and globalised economy. International markets provide co-ordination in and of themselves, which national strategies and policy interventions can merely distort" (Hirst and Thompson, 1995: 59). When China enters the more competitive international market, individual enterprises are free to do their own market research and development and governments can use their connections and bureaucratic position to serve economic growth. Globalisation is thus an essential step to rapidly remove obstacles between the domestic communist prices and international market prices, to send the price signal to entrepreneurs. Accordingly, "it is… essential to move as rapidly as possible to a transparent and decentralised trade and exchange rate system, in order to hasten the integration into the world economy…… to market clearing levels" (IMF et al., 1990: 17).

4.4.3 The institutions and the firms with foreign ownership

Instead of a short-term achievement, the reforms in China is characterised by long-term values (Hofstede, 1991) such as thrift and perseverance to sustain steady economic growth (Jackson and Bak; 1998). Its economic growth is at an average rate of 9.5 % for more the twenty years, which is the highest one in the world (table 4.3). This achievement depends much on the adoption of reforming policies to encourage inward FDI. From an isolated economy, the FDI has largely helped China to overcome the shortage of capitals in transition (table 4.4; table 4.5), and China has become the second largest recipient of FDI in the world since 1993 (Zhang, 2001). In addition, the foreign invested enterprises (FIEs) have produced more than one fourth of total industrial output since 2002 (table 4.6) and created more than half of international trade since 2000 (table 4.7).

Table 4.3 The GDP growth in China

Year	GDP (US$ Billion current price)	Annual growth (%)
1987	321.39	8.77
1988	401.07	24.79
1989	449.10	11.98
1990	387.77	-13.66
1991	406.09	4.72
1992	483.05	18.95

1993	613.23	26.95
1994	559.23	-8.81
1995	727.95	30.17
1996	856.01	17.59
1997	952.65	11.29
1998	1019.48	7.02
1999	1083.28	6.26
2000	1198.48	10.63
2001	1324.81	10.54
2002	1453.84	9.74
2003	1640.96	12.87
2004	1931.65	17.71
2005	2256.92	16.84
2006	2712.92	20.20
2007	3494.24	28.80
2008	4519.95	29.35
2009	4990.53	10.41
2010	5930.39	18.83
2011	7321.99	23.47

Source: World Economic Outlook.

Table 4.4 Utilization of Foreign Capital in China

Year	Total Amount of FDI actually utilised (100Million US$ at current price)	Annual growth (%)
1989	33.93	
1990	34.87	2.77
1991	43.66	25.21
1992	110.08	152.13
1993	275.15	149.95
1994	337.67	22.72
1995	375.21	11.12
1996	417.26	11.21
1997	452.57	8.46
1998	454.63	0.46
1999	403.19	-11.31
2000	407.15	0.98
2001	468.78	15.14
2002	527.43	12.51
2003	535.05	1.44
2004	606.30	13.32
2005	603.25	-0.50
2006	630.21	4.47
2007	747.68	18.64
2008	923.95	23.58
2009	900.33	-2.56
2010	1057.35	17.44
2011	1160.11	9.72

Source: China Statistical Yearbook 2010.

Table 4.5 Total investment and foreign investment in China

Year	Total investment	Foreign investment	Share (%)
1997	24941.11	2683.89	10.76
1998	28406.17	2617.03	9.21
1999	29854.71	2006.78	6.72
2000	32917.73	1696.24	5.15
2001	37213.49	1730.73	4.65
2002	43499.91	2084.98	4.79
2003	55566.61	2533.71	4.56
2004	70477.4	3854.01	5.47
2005	88773.6	4657.06	5.25
2006	109998.2	5589.17	5.08
2007	137323.9	6735.69	4.90
2008	172828.4	7809.60	4.52
2009	224598.77	7689.60	3.42
2010	251683.77	8422.20	3.35
2011	311485.13	9285.90	2.98

Source: China Statistical Yearbook. (Unit: 100 million Yuan at current price)

Table 4.6 The industrial contribution of the firms with foreign ownership

Year	Gross industrial output value	Gross industrial output value of the firms with foreign ownership	Share (%)
1994	70176	6645	9.469049
1995	91894	10722	11.66779
1996	99595	12117	12.16627
1997	113733	14399	12.66035
1998	119048	17750	14.90995
1999	72707.04	18954.23	26.06932
2000	85673.7	23464.6	27.38834
2001	95449	27220.9	28.51879
2002	110776.5	32459.3	29.30161
2003	142271.2	44357.8	31.17834
2004	187220.7	58847.1	31.43194
2005	222315.9	67137.76	30.19926
2006	316589	100076.5	31.61087
2007	405177	127629	31.49957

Source: China Statistical Yearbook. (Unit: 100 million Yuan at current price)

Table 4.7 The contribution of FDI to the trade of China

	Total foreign trade (Billion US$ at current price)	Foreign trade by FDI (Billion US$ at current price)	Share of FDI (%)
1990	115.4	20.1	17.42
1991	135.7	29	21.37
1992	165.5	43.7	26.4
1993	195.7	67.1	34.29
1994	236.6	87.6	37.02
1995	280.8	109.8	39.1
1996	289.9	137.1	47.29
1997	325.1	152.6	46.94

1998	323.9	157.7	48.69
1999	360.6	174.5	48.39
2000	474.3	236.7	49.91
2001	509.7	259.1	50.83
2002	620.8	330.2	53.19
2003	851.2	472.2	55.47

Source: China General Custom, Custom statistics 2003; China Ministry of Commerce, 2003.

Transaction cost theory suggests that it is more efficient for a firm to use hierarchies rather than market intermediaries to serve a foreign country (Beamish and Banks, 1987; Buckley and Casson, 1976). In transition economies, FIEs, as the most common form of FDI, are designed to deal with market imperfections by internalizing business activities e.g., exporting and importing. They enjoy an advantage over local firms in the form of an internal market within their multinational networks (Ghoshal and Barlett, 1990), which allow them to allocate resources and conduct transactions most efficiently. On the other hand, this form is also associated with increased managerial costs due to large geographic distances and high demands on information processing. The FIEs are able to utilize the ownership advantages of their parent firms in competing with local firms (Dunning, 1981). These may include proprietary assets such as technological know-how and brand names, managerial practices and organizing routines, and strong corporate cultures. Furthermore, the FIEs can gradually acquire host-country specific information through learning from local partners and competitors (Delios and Beamish, 2001). This enlarges the ability gap between foreign and local firms.

The advantages of FDI are now well recognised and studied. The FIEs' strategies connected with a foreign partner can improve a local partner's operational skills and competitive resources (Geringer, 1991), technological, and production capabilities (Dyer, 1997), and market power and competitive position (Hamel, 1991). FIEs can enhance the local partners' managerial efficiency in business operation (Tallman and Shenkar, 1994), organizational legitimacy (Kostova and Zaheer, 1999), and corporate reputation (Hamel et al., 1989). They all suggest that, as one important part of the reforms, the openness policies imply China looks for strategic or organizational attributes as the same essential as financial capability in choosing foreign partners (Luo, 2002). However, the FIEs have negative effects on the fundamental level of long term national welfare (Zhang, 2001). FDI may actually lower domestic savings and investment, while reducing China's foreign-exchange earnings. Due to the practice of transfer pricing and the variety of investment allowance provided by the Chinese government, the contributions of FIEs usually are far less than expected.

FIEs generate technology spillover effects in domestic market, providing technical assistance to domestic firms to meet new requirements, collaborating for developing technology, training and then losing staff to domestic enterprises, and providing domestic enterprises with a manufacturing base. Rodriguez-Clare (1996) further investigated the theoretical possibility of vertical inter-industry spillovers. The spillover effects of FIEs take place through several channels, including training local suppliers of intermediate inputs, setting a higher standard regarding product quality and delivery, and the import competition as the FIEs have the option of international suppliers. Moreover, spillovers to downstream firms can also be created through a number of mechanisms (Meyer, 2003). These include quality of intermediate goods and machinery supplied by FIEs, support in terms of more effective marketing and management techniques shown by FIEs, and establish service infrastructures that are not locally available before. However, Girma and Gong (2008) note productivity spillovers may have geographical dimensions. First, direct contacts with domestic suppliers and distributors may be local only to minimise transport costs and facilitate communication. Second, although the staff training of FIEs and subsequent labour turnover is one of the main technology transmission mechanisms (Fosfuri et al., 2001), only local employers will experience the benefits of FIEs without an effective labour mobility. Similarly, demonstration effects may also be in local region (Blomstrom and Kokko, 1998).

On the other side, FDI generates crowding-out effects upon the host country's market, preventing domestic enterprises from developing. These effects occur in two ways in China. First, FIEs have easily recruited technologically talented workers with higher wages. Second, FIEs restrict any technological development by their domestic partners through their controls in joint ventures. A host country should encourage spillover effects and strict crowding-out effects from FIEs. Hu et al. (2003) finds that FIEs from developed economies may crowd out the domestic efforts of product innovation. Their analysis shows that innovation and technology transfer are not substitutes. When combined with innovation, FIEs' technology transfer generates great productivity gains. The addition of technology transfer is also able to raise the returns to home-grown innovation. Long (2005) notes several factors determine that the spillover effects are more important than its crowding out effects in China. First, Chinese big market scale leaves enough growing space for domestic enterprises despite competition from FIEs. Second, the industrial foundation in China is well developed before the openness, and FIEs are encouraged to purchase domestically as much as possible. Consequently, FIEs establish strong links and cooperate with domestic enterprises, which cause significant

technology spillover effect. Third, competition between FIEs and domestic enterprises accelerate technology spillover. As a result, Fu (2004) empirically supports that exports and FIEs have played an important role to break the geographical fragments by increasing the efficient mobility of industrial resources across in China.

Compared to developed countries, and even to other emerging economies, China's legal and other institutional systems are underdeveloped, as are its infrastructure, resource supply and managerial competencies (World Economic Forum, 2000). It is a relatively complex and uncertain environment, which presents several performance risks to foreign investors (Child and Yan, 2003). Especially for the FIEs, there are institutional difficulties in China (Ahlstrom et al., 2003), such as variations in legal systems across regions, laws oriented towards public order and control by governments, interference by bureaucrats and regulators, and the practice of bribes and corruption distorting law enforcement. Facing different institutions, foreign investors have to adjust their strategies to local institutions or to invest where institutions are most conducive to their type of business operations.

According to the neoclassical theories, markets are usually a better way to organise economic activities than a centrally planned economy (Mankiw, 2001). FDI have the positive effects on China's economic transition toward market-oriented systems (Zhang, 1993), comprising diversifying the ownership structure, establishing market-oriented institutions, facilitating reforms of SOEs. Particularly, FDI spurred the transiting progression by stimulating competition and encouraging China's integration to the global economy. The FIEs also played a major role in transforming China's ownership structure, from one with predominantly state ownership towards a more desirable one with private ownership that is more appropriate in marketing competition. By establishing special economic zones to attract the FDI in the beginning, the liberalisation applied pressure in introducing market mechanisms to other parts of China. FDI in China have thus stimulated the transition through introducing a market-oriented institutional framework. For example, the legal framework specifically designed for FDI has prompted changes in other laws and regulations governing domestic business operation, especially in relaxing foreign exchange restrictions, establishing a regulatory framework for the protection of intellectual property rights, and reforming accounting systems (Pomfret, 1997). FDI played a unique role in reforming the large SOE sector as FIEs have influenced the SOEs directly through joint ventures or indirectly through demonstration effects, i.e. incentive schemes, production organisation systems, accounting methods, and risk management. Thus, the FIEs

broke the state monopolies, and help China to promote its exports through the FIEs' existing overseas marketing networks (Zhang and Song, 2000).

The FIEs' legitimacy is declining as domestic firms seek growth to face increasing competition in China. In addition, the legitimacy of FIEs is often politically affected in the international arena. For example, American firms were attacked by demonstrators when the Chinese embassy was bombed by NATO in 2000, and Japanese firms have also endured violent attacks by demonstrators at times since 2000 when the bilateral relations between China and Japan turned bad (Xu et al. 2006). The FIEs also suffer from conflicting demands caused by incompatible institutional rules of their home and host countries (Kostova and Zaheer, 1999; Xu and Shenkar, 2002). Sometimes local legitimacy can only be achieved at the cost of operational efficiency within the system of FIEs (Westney, 1993). Although the majority of Chinese people are concerned about the competitive pressures on domestic firms from the FIEs as a result of the WTO accession, Xu et al. (2006) finds that many domestic firms achieve higher performance than the FIEs. Nowadays, the domestic firms have made progress through reform and competition, and the FIEs have gradually learned to cope with China's unique institutional setting and competitive environment. Based on the study of Xu et al., apart from the SOEs, all other domestic firms have performed better than the FIEs in 2002. This result provides evidence that the openness policies are successful for China to improve the business performance of the firms.

FIEs have assisted Chinese economic restructuring towards higher technical efficiency. For example, the diversified income distribution characteristic of FIEs has itself added to income inequality amongst Chinese employees, both between different kinds of enterprises and even within the organisation of a FIE (Zhang and Zheng, 1998). More importantly, because of the demonstrable effects of the foreign enterprises' unequal wage structure, it has now been widely accepted that an unequal income structure within an enterprise is an important source of efficiency, and this unequality has been followed by most of the domestic enterprises (Guan, 2001). Therefore, once the efforts to absorb FDI have introduced new management and marketing culture as reference for domestic firms, those social and cultural impacts have resulted in further reform of internal structure and prompted some changes in social foundation of China, such as the ownership of enterprises (Hussain, 1996). Those in turn led to the construction of a set of beliefs. Those changes work together to bring on the creation of marketing oriented institutions, consisting of further openness policies, the introduction of new

ideas, and the efforts to increase competitiveness (Qian, 1999). Principally the work to better absorb and operate FDI is based upon moving transactions more effectively. Investment liberalisation in China is thus regarded as a major step toward an efficient institutional system, and this changing process is mainly started by the FDI in the beginning of the transition. In other words, institutions connected with investment liberalisation might largely determine the operation of FIEs and long-term economic growth.

4.4.4 Ownership change and the emergence of private ownership

The transition economy, characterized by a weak market structure, poorly specified property rights, and institutional uncertainty increases the relative cost of redistribution even while rendering costly market transactions (Nee, 1992). This condition of reform creates an institutional environment continuously shifting from redistribution to markets. As market institutions become gradually dominant in the transition economy and as the institutional foundation of a market economy is incrementally constructed, these changes result in an increase in the cost of centrally governance structures and decline in the cost for private firms. These institutional changes improve economic performance (Nee and Su, 1990) (table 4.8; table 4.9). Key factors that explain the rapid growth are the expanding relative scope of market institutions in coordinating the economy, changes in the structure of property rights, and the incremental shift from a redistributive to a regulatory state (Nee, 1989).

Table 4.8 The Economic Growth in China

Year	GDP (Billion US$ at current price)	Annual growth (%)	GDP per capita (US$ at current price)	Annual growth (%)
1985	305.26		288.39	
1986	295.48	-3.20	274.84	-4.70
1987	321.39	8.77	294.05	6.99
1988	401.07	24.79	361.24	22.85
1989	449.10	11.98	398.48	10.31
1990	387.77	-13.66	339.16	-14.89
1991	406.09	4.72	350.61	3.38
1992	483.05	18.95	412.26	17.58
1993	613.23	26.95	517.42	25.51
1994	559.23	-8.81	466.61	-9.82
1995	727.95	30.17	601.01	28.80
1996	856.01	17.59	699.41	16.37
1997	952.65	11.29	770.59	10.18
1998	1019.48	7.02	817.14	6.04
1999	1083.28	6.26	861.21	5.39
2000	1198.48	10.63	945.60	9.80
2001	1324.81	10.54	1038.03	9.77

2002	1453.84	9.74	1131.81	9.03
2003	1640.96	12.87	1269.83	12.19
2004	1931.65	17.71	1486.02	17.03
2005	2256.92	16.84	1726.05	16.15
2006	2712.92	20.20	2063.87	19.57
2007	3494.24	28.80	2644.56	28.14
2008	4519.95	29.35	3403.53	28.70
2009	4990.53	10.41	3739.62	9.87
2010	5930.39	18.83	4422.66	18.26
2011	7321.99	23.47	5434.36	22.88

Source: World Economic Outlook, IMF.

Table 4.9 The Chinese international trade data of total merchandise

Year	Export (Million US$ at current price)	Annual growth (%)	Import (Million US$ at current price)	Annual growth (%)	Trade (Million US$ at current price)	Annual growth (%)
1990	62091		53345		115436	
1991	71910	15.81	63791	16.38	135701	17.56
1992	84940	18.12	80585	20.84	165525	21.98
1993	91744	8.01	103959	22.48	195703	18.23
1994	121006	31.90	115615	10.08	236621	20.91
1995	148780	22.95	132084	12.47	280864	18.70
1996	151048	1.52	138833	4.86	289881	3.21
1997	182792	21.02	142370	2.48	325162	12.17
1998	183712	0.50	140237	-1.52	323949	-0.37
1999	194931	6.11	165699	15.37	360630	11.32
2000	249203	27.84	225094	26.39	474297	31.52
2001	266098	6.78	243553	7.58	509651	7.45
2002	325596	22.36	295170	17.49	620766	21.80
2003	438228	34.59	412760	28.49	850988	37.09
2004	593326	35.39	561229	26.45	1154555	35.67
2005	761953	28.42	659953	14.96	1421906	23.16
2006	968978	27.17	791461	16.62	1760439	23.81
2007	1220456	25.95	956116	17.22	2176572	23.64
2008	1430693	17.23	1132567	15.58	2563260	17.77
2009	1201612	-16.01	1005923	-12.59	2207535	-13.88
2010	1577754	31.30	1396247	27.96	2974001	34.72
2011	1898381	20.32	1743484	19.92	3641865	22.46

Source: the WTO statistics database.

Conventional property right theory suggests that a clearly defined ownership is desirable for efficiency to reduce externality and improve incentives by assigning owners the right to claim income and to control the firm (Wen et al., 2002). Particularly, market competition can induce

ownership restructuring, and existing social capital matters could make positive contributions to the transition (Sun, 2000). In a Communist country, the primary issues is that ownership changes combined with a more effective mechanisms start social acceptance of private ownership to furthermore create the incentives of marketing participation and involvement. Gradually, individuals could be knowledgeable of market and have a clear recognition of competition and individual rewards (Vanderslice, 1999). Sharing the values and objectives in competitions, both private owners and employees are fully committed to the business success because it is their future at stake (Wheelock and Baines, 1998; Wen et al., 2002). In essence, together with FDI inflows, the institutionally related ownership specific advantage comprises the structure of both internally generated and externally imposed incentives, regulations and norms. The composition and strength of ownership of firms is likely to represent the character of the institutional infrastructure (Dunning, 2006), and each of those constituents may influence most areas in the wealth-creating process (Dunning and Narula, 2004; Dyer and Singh, 1998).

In theory, a private firm that is invested in by private owners should be independently operated of government or any others. However, in the absence of well-defined private property rights, they are exposed to intervention and a restriction of state agencies. The greater autonomy of private firm is thus connected with high transaction costs (Nee and Young, 1990). Private firms operate under hard budget constraints, as their survival depends on market performance and profitability. The private firm's capacity for survival and growth is also constrained by difficulty of access to capital and raw materials controlled by the state owned sector. In a socialist redistributive economy, state banks and official sources of credit generally offer loans more on the basis of political considerations than economic ones (Walder, 1991). The SOEs enjoy priority in access to be allocated under the plan. Private firms lack the legitimacy and necessary political backing to have reliable access to capital and thus must depend on the sources with more costs. Due to these restrictions on factor resources in socialist state, private entrepreneurs depend more on short-term investment decisions aimed at fast returns, liquidity, and a low rate of reinvestment. Many private firms seek close ties with government, often paying a "management fee" for assistance in obtaining reliable access to factor resources and political protection, although such fees largely increase the transaction costs in business (Nee, 1992).

The transition economy has given birth to private ownership in China, which is shaped by new pressures for efficiency and flexibility in rapidly changing environments in which market forces incrementally replace the state redistributive mechanism (Powell, 1988). Private entrepreneurs

have strong incentives to take risks and innovation, and their profit-maximizing orientation and hard-budget constraints encourage more cost-benefit calculations in their investment decisions. Because profits belong directly to them, entrepreneurial incentives are growth-oriented. Private entrepreneurs face greater uncertainties due to the continuing instability of fundamental rules of the game involving the market economy (Nee and Young, 1990). The private enterprises "use resources and/or governance structures from more than one existing organization" (Borys and Jemison, 1989: 235), with their capacity to reduce uncertainty in inter organizational relationships involving bilateral dependency (Pfeffer, 1972). Falling between market and hierarchy, transaction cost economics explains the emergence of private ownership as a means to economise transaction costs when "parties to the transaction maintain autonomy but are bilaterally dependent to a nontrivial degree" (Williamson, 1991: 271). Moreover, with less strict enforcement, an elastic contracting arrangement is a supplementary mechanism to facilitate continuity and efficiency of transaction (Williamson, 1991).

The development of private sectors actually depends on the support of Chinese local governments, which are dependent on revenues gained from the private firms (Su, 1992). Local government and private enterprise constitute a loosely coupled coalition of interest groups, in which interests and group cohesion are continuously shifting and reconstituting themselves in new combinations according to changing environmental conditions (Pfeffer and Salancik, 1978). Such interventions of government ease the firm's budget constraint to enhance the firm's competitiveness in markets by offering subsidies, facilitating horizontal and vertical economic integration, providing access to credit capital, and investing in infrastructure. However, local government involvement has been interpreted as a distortion of partial reform that undermines the efficiency goals of economic reform (Wong, 1986, 1987). The inefficiency is transferred from central ministries down to local governments, still by the anti-market, protectionist conservatism of local officials and the Maoist legacy of closed local economies. By contrast, Nee (1992) argues the governments' involvement is able to compete effectively in a partial reforming economy, in which the still-dominant redistributive institutions interact with market forces in a manner that subordinates market institutions.

The type of reform implemented in China is one in which bureaucrats are intimately involved in promoting private activity without complete market liberalization or democratization (Frye and Shleifer, 1997). In fact, Chinese officials use the term "share ownership scheme" instead of "privatization" (Sun et al., 2002: 2). Privatization explicitly assumes capitalistic private

ownership whereas under the share ownership scheme, as long as the state still holds some shares of the SOE, it still conforms to the communist public ownership principle. Such an ideology of the socialist market economy leads the Chinese government to retain a substantial portion of the ownership of privatized enterprises (Sun and Tong, 2003). Although state ownership is theoretically regarded as the origin of agency problems in SOEs, it can also be argued that partial privatisation is better than complete privatisation to preserve the economy's socialist structure. First, there can be a signal for continued state ownership (Mok and Hui , 1998; Schmitz, 2000). From the incomplete contract approach, partial privatization could well be the optimal ownership structure as investors interpret high shares of the state as a guarantee against the uncertainty of transaction. Second, viewing SOEs as public goods, a quick and complete privatization is not desirable. In the absence of a well-functioning property-rights market, privatization can result in the transfer of public assets to private agents who do not use them more efficiently than under state ownership (Jefferson, 1998).

Employing the accounting measures of an SOE's performance before and after privatization, Sun and Tong (2003) find that ownership structures influence performance across firms and over time, and recently privatized SOEs are of higher quality and indicate more improvements after privatization. Specifically, the factor of state shares has a negative impact on a firm's performance, which is consistent with the results of other scholars (Jin and Qian, 1998; Qi et al., 2000). In addition, Sun and Tong (2003) state that the problem behind the ownership structure that prevents corporate governance to be effective as the government still keeps a major control on the SOEs so that non-state shareholders who can play a more active and positive role on the SOEs do not have either the power or the incentive to do so.

There are arguments about ownership and business efficiency. Barberis et al. (1996) point out that it is not exactly clear how private ownership leads to greater efficiency, and government ownership is not always less efficient than private ownership (Martin and Parker; 1995; Kole and Mulherin; 1997). More studies show that government ownership is less efficient than private ownership (Boardman and Vining, 1989; Megginson et al. 1994; Vining and Boardman, 1992). Dewenter and Malatesta (2001) support that government firm displays lower profitability, and Megginson and Netter (2001) provide empirical evidences in favour of private over public ownership. In addition, as there is no significant independent shareholders in China who can provide effective monitoring of the SOEs management, Lin et al. (1998) argue that, as an attempt of reforming efforts, expanding the managerial independence will worsen the agency

problems. Similarly, although the majority of Chinese are concerned about the competitive pressures on domestic firms from the FIEs, Xu et al. (2006) finds that many domestic Chinese firms have made progress through reform and competition, and FIEs have gradually learned to cope with China's unique institutional environment. Based on the study of Xu et al. (2006), except the SOEs, all other domestic firms have performed better. This result confirms that ownership change is the right way to improve business performance.

4.5 The business constraints of the institutions in China

As a developing economy in transition, unavoidably, there are some business obstacles in the changing institutional framework in China. On the side of formal institutions, there is an increasing need to revise law making institutions to deal with the issues of economic reform and the FIEs. In China, "basic laws" are enacted by the National People's Congress, whereas "laws" can be enacted by its Standing Committee, and the State Council can issue "administrative laws". However, none of these critical terms are defined. In practice, most legislation originates in the State Council, which issues "administrative regulations", while the more than 60 ministries, commissions and bureaus that are subordinate to the State Council issue "administrative rules". Provinces and sub-provincial governments issue "local regulations" and "local rules", but the relative authority of these norms have been badly defined (Xin and Ding, 2003; Lubman, 2006). In addition to the problems caused by tentative or incomplete laws and regulations, serious inconsistency exists between national and local legislation (Hung, 2004). The laws and regulations related to FIEs depend on a balance between encouraging economic activities outside the state sector on one hand and trying to control it on the other. For instance, government departments in charge of the enterprises operation must evaluate and approve proposed FIEs that include an SOE. The contract would then be reviewed for conformity to regulations on a wide range of business matters. As a result, "inconsistent regulatory performance is often the product of the conflicting goals of different bureaucracies" (Potter, 1997: 239).

As more legal rules appeared and reform stimulated the growth of commerce, the need to reorganize the judicial system increases. The powers of the courts are subject to serious limitations even after the reform. The courts still remain part of a state apparatus that still reflects the severe limits including the doctrine, structure and practice of the pre-reform Maoist Party-state on the judiciary. In addition, the courts have been hampered by judges' low levels of legal education and professional standards. A more basic issue is presented by the limited

authority of the courts. In the bureaucratic hierarchy, courts are only parallel to, rather than superior to, other units of the bureaucracy in China. When courts seek to enforce judgments, agencies whose actions are required to assist the courts sometimes refuse to cooperate (Reinstein, 2005). Furthermore, the decision-making behaviour of the courts is similar to that in administrative agencies. Adjudication is only very slowly becoming differentiated from other bureaucratic decision-making processes. The power of local courts is impaired by local protectionism, which critically blunts the effectiveness of China's judiciary. Judges are selected and paid by local governments, a relationship that leads to pressure on the courts to favour their localities in litigation involving foreigners and parties from elsewhere in China, consequently impeding fair adjudication and enforcement of judgments (Lubman, 2006).

For the business constraints of the informal institutions, similar to the most of developing countries and former Communist countries, corruption exists in the judicial system, in government procurement, and in investment approval process. The effects of corruption consist of unreliable contracts enforcement, a general waste of resources, delays in investment procedures, higher transaction costs, and the discouragement of further investment eventually (Meagher, 1997). On one side, the costs of corrupt negatively affect the business performance (Wei, 1997; 2000b). On the other side, corruption lowers uncertainty costs in the markets and allows transaction to take place and also allows markets to operate at a high level (Betancourt, 1998). In particular, corruption could play a substitute role for an independent judiciary when transactions are non-self-enforcing, i.e. role as a third party enforcement mechanisms for the contract. More interestingly, a widespread corruption can be a sign of institutional weakness in transition economies (Abed and Davoodi, 2000). Apart from the differences, the relation between corruption and transaction stresses the importance of institutions in economic performances.

4.6 Summary

There are two major changes in China's transition--- "the shift of ownership and property rights …the increasing role played by market transactions" (Boisot and Child, 1996: 600). As there is a cultural tradition of strong government involvement in China (Nee, 1992), government behaviour influences both the ownership reform and organisational behaviour, and also actively forms a partnership with the participants to smooth the market failure. The changes focusing on property rights or incentives involve some fundamental changes, regarded as legitimate and institutional logics that govern individual actions, although the focus on ownership seems to

reflect the imposition of western concepts that may be inappropriate for Chinese traditional context. As Child (1994: 19) noted, "there is a substantial difference between the western concept of ownership, together with the property rights attaching to it, and that conventionally followed in China. Chinese concept of ownership is appreciably more ambiguous and is a political and ideological consideration rather than an economic and legal one".

FDI are practically useful because of their capacity to penetrate authoritarian regimes and connect directly to individuals (Dunning, 1988). These FDI inflows continuously pressure China to set up institutions common in the West, but absent in China. This includes laws regarding bankruptcy, contracts, and transparency in governance mechanisms. More than just adjusting incentives and redistributing property rights, China introduced new logics of action, new roles, and new conceptions, to maintain an appropriate business operation or to maximise profits rather than central allocations and plan goals. Regarding FDI inflows, the operation of FIEs embody new economic and social logics. They represent new type of culture, combining the elements from existing forms and new materials. The new ways of thinking and acting supports the social change that eases the transition, with the "new" concept that individuals could pursue their private benefits equally (Campbell, 1997).

Fan et al. (2007) notes that the business cost depends on intangible factors as "culture" affects the outcomes by affecting economic agents' prior beliefs, preferred economic activities, and political choices. Attitudes can affect cross-border economic exchanges because they affect how people interact and negotiate on economic matters (Siegel et al., 2008). In conclusion, the success of FDI implementation depends on the abilities of protecting property right and of reducing agency and information asymmetry problem. Consequently, the cultural heritage of a society is one of the determinants in economic growth (North, 2005), while institutions of a nation are shaped by the culture in which they are embedded. Separating the cultural-cognitive duality, Chinese cultural beliefs clearly stress the extent to which agency—the power to make a difference—is restricted to the superordinate actors in hierarchy (Farh and Cheng, 1999). FDI is likely to have a more pronounced effect on the culture of host countries as they may introduce "a spirit of entrepreneurship and competition" to domestic firms through a long term business operation (Dunning and Bansal, 1997: 4).

In this chapter, the author focuses on the relation between the institutions and the firms' business performance in China's transition. The author examines the business performance of

the firms with different ownership respectively, including the SOEs and the FIEs. The researcher considers that ownership change is the key to sustain the improvement of business efficiency, and review how the government of China uses external factors to overcome its internal obstacles in order to start and maintain its economic reform in the beginning. The bilateral and multilateral negotiations provide a market-oriented mechanism of international standard toward development. FDI acts as an important factor to fill the capital gap in economic growth and also direct Chinese government to follow the bilateral and multilateral agreements made. On the other hand, as a transition economy where some fundamental institutions are missing, the emergence of private ownership is the most important internal issue to support this sustainable reform in China. As both FDI and private ownership call for a basic reform of institutions in China, aiming a long term economic growth, they eventually and actually work together to start, to continue and to supervise the institutional changes in China. These changes include socio-political reform, regulatory and tax system, banking sector reforms, and corruption.

However, although there are outstanding changes that support an economic miracle in China, the role of the institutional factors in explaining the business performance in China is not comprehensible. Notwithstanding, the literatures do not deeply clarify how the institutional constraints influences the firms with different ownership. To clarify the institutional influences on the business performance, chapter 5 will demonstrate the research design and methodology, and further investigation will be displayed in chapter 6, chapter 7 and chapter 8.

Chapter 5 Research design and methodology

5.1 Introduction

In this chapter, the author will discuss the research design and methodology. This study involves using a positivist approach and a quantitative method to investigate the relationship between institutional constraints and the firms' business performance, which is done by testing empirical relations between the research variables. The procedure consists of deducing hypotheses from the theory, expressing these hypotheses in operational terms, testing these hypotheses, examining the results, and confirming or modifying the theory if necessary (Robson, 1993). The beginning sections will consider the philosophical arguments and philosophical foundations, and also the methodological issues of this study. Based on the research hypotheses summarised, the researcher will investigate the characteristics of research data, statistical techniques and the design of this research.

5.2 Methodological consideration

5.2.1 Different research approaches and their philosophical positions

There are different rules and steps to take in order to investigate social research questions. These steps follow different approaches which are either in favour of or against a particular way of research investigation. These arguments are based on different assumptions about the reality (Crotty, 1998). The choice of a particular method is linked to epistemological questions related to our understanding of what human knowledge is, what it entails, and what status can be ascribed to it, in addition to what kind of knowledge will be attained by research (Crotty, 1998). Social research is composed of the following four fundamental elements (Crotty, 1998):

- Methods: the techniques or procedures used to gather and analyse data related to a particular research question.
- Methodology: the strategy, the process or the design lying behind the process and its use of particular methods. And then relating the choice of strategy and its use of methods to the desired outcomes.
- Theoretical perspective: the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria.
- Epistemology: the theory of knowledge embedded in the theoretical perspective and thereby in the methodology.

As the methodology would not necessarily constitute a consensus among all researchers (Burrell and Morgan, 1979), people have different approaches towards the nature of knowledge, their

understanding about the nature of knowledge varies, and so does the research methodology. Objectivism and subjectivism are two main approaches in social research (Easterby-smith et al., 1991; Laughlin et al., 1986). Objectivism is an epistemological view that things exist as meaningful entities independent of consciousness and experience, and that they have truth and meaning residing in them as objects and that careful research can attain that objective truth and meaning (Crotty, 1998). The most important element of objectivism is a positivist position. According to positivism, social world exists externally, which should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition (Easterby-smith et al., 1991). Positivism is based on the assumption that knowledge consists of patterns and general causal relationship about the real world. Business research upon positivism generally engages in survey or use of published data and normally employs a quantitative method of statistical analysis. On the contrary, in an interpretive approach, subjectivist approach regards reality as socially constructed rather than objectively determined. They look for culturally derived and historically situated interpretation of the social world (Crotty, 1998; Easterby-Smith, et al, 1991), and the qualitative method is generally associated with this approach.

Qualitative method emphasises an in-depth investigation to find out the meaning of social phenomena (Hussey and Hussey, 1997; Ragin, 1994). This method groups a variety of techniques, such as interviews, observation and diary methods. Quantitative methods focus directly on the relations among variables, especially the effects of causal or independent variables on outcome or dependent variables. The strength of the correlation between independent and dependent variable provides evidence in favour of or against the idea that two variables are causally connected or linked in some way. Questionnaires, test/measures, observation and gathering data directly from database are used as techniques for this method. The decision of methodology follows the epistemological approach that a researcher chooses. However, the flaws attached to each of these individual methods implies that it is good not to be method-bound as it helps to avoid the biasness of these methods and to tackle research question from a different and richer perspective (Hussey and Hussey, 1997; Easterby-Smith et al., 1991).

5.2.2 Positivism and its limitations

The constraints on the firms' business performance are independent of social individuals. A research can thus employ mathematics and logical methods (Mill, 1965), via quantitative manifestations, in devising experiments to test social theories. To translate concepts into

empirical indicators that are observable and measurable in an objective way (Lazarsfeld and Rosenberg, 1955), it is important to use the key indicators between different phenomena to analyse the casual business relationships. In other words, an event can be predicted as a logical consequence, and hypotheses could be seen as solutions to a problem that can be connected with the explanation of the behaviour of some aspects of the universal world (Chalmers, 1999). The author also agrees that the research process is to translate concepts into empirical indicators, with the engagement of a researcher in a theoretical problem (Lazarsfeld and Rosenberg, 1955). Survey data are available in official websites, and mathematical methods can be tested publicly. They can be replaced by new tests with the advanced technology, to constitute a scientific basis of social knowledge (Galileo, 1967). In addition, the investigation is not subject to our personal value and individual will, like objective examination of physical facts (Durkheim, 1964).

According to positivists, an "explanation of an event means to deduce a statement… using as premises of the deduction one or more universal laws, together with certain singular statements" (Popper, 1959: 59). These methods are subject to well-grounded knowledge, an ability to hold constant factors to the relationship of interest, and clear deductive connections to the overarching theory (Halfpenny, 1982). As there might be a number of choices based on different theories, it is the scientist who actively decide which is the scientific method or the neutral one (Campbell, 1957). Moreover, there is no guarantee that these generalisations will hold in the future since they are based on previous evidence (Hume, 1987). Additionally, the truth of a scientific law is determined by its correspondence with the observed facts, and the neutral method of positivism is not absolute in reality because there are lots of social phenomena that are relative to the observer (Bridgeman, 1927). In order to reduce errors, the choice is to adopt the ideas that have been socially accepted (Ryan, 1970).

This research consists of deducing hypotheses from the theory, expressing these hypotheses in operational terms, testing these hypotheses, examining the results and confirming or modifying the theory if necessary (Robson, 1993). As business theory might contain concepts that are not subjective to observational testing, the author uses theoretical and observational languages that are linked together by correspondence rules to interpret some theoretical concepts empirically (Nagel, 1961). In this study, the author chooses one survey to minimise subjective errors from different individuals in examining the phenomena. The combination of mathematical and logical interpretation formulates social rules with both observational and non-observable facts as mathematics represents a way of defining social phenomena within a neutral framework.

5.3 Research design

5.3.1 Research data

As the centre of business research, the more successful a model is at generating a testable implication, the greater its theoretical credibility (Ryan, 1970). The methodology upon positivism is a common mode of statistical explanation, wherein the scientists try to explain social phenomena in terms of its correlation with other variables. This study is to use the statistical explanation as a form of causal explanation which requires hypotheses about underlying causal mechanisms, as long as the explanatory way has been established properly among social variables (Little, 1991). As some factors are not directly observable, this research seeks to operationalise the theoretical hypothesis in terms of observable indicators. A survey usually includes three inquiry levels, named the philosophy of science level, the science level, and the application level. Van Gigch (1991, 2002) additionally advocates that epistemological and methodological questions can only be studied from a meta-modelling perspective:

- Philosophy of science level: This level accounts all inquiries concerned with the sources of knowledge of a scientific discipline. At this level, questions delve into the ontological nature of the domains of a scientific discipline as well as into its epistemology.
- Science level: This level is responsible for the study of the scientific aspects of a discipline. It uses knowledge flowing from its meta-level, i.e. the philosophy of science level, where epistemologies evolve. At this level, the methodologies of a scientific discipline are formulated and designed.
- Application level: The differences and similarities among scientific disciplines require that they be studied not only from the points of view of philosophy of science and of science, but also from the perspective of their fields of application.

Among quantitative approaches, secondary data analysis is frequently adopted if a sampling frame existed to avoid the collection problem, especially for a large-scale data. With a sufficient number of respondents with certain character, researchers have access to public data that they can systematically examine. Together with financial incentives, the availability of these data sets has led to exciting research opportunities. However, as the richness of secondary data is mainly designed for policymakers, the ignorance of some fundamental issues may result in wrong understanding and incorrect evaluation (Thomas and Heck, 2001).

The author's first concern is that the questionnaire design should be able to reduce likely errors from respondents, interviewers and coders. As people's participation in a survey is voluntary, a questionnaire has to help them to engage their interest, encourage their co-operation, and elicit answers close to the truth (Hoinville and Jowell, 1978). However, there can be some problems due to the possibility of a researcher and respondent sharing different community of meaning structures (Hughes, 1980), such as the differences between what people say they do and what they actually do (May, 1995). In theory, questionnaires can adequately deal with this issue if a complete context can be obtained through the overall package---additional questions in the questionnaire can enable a researcher to identify such variation in researcher/ respondent understanding of the significance of responses (Marsh, 1982).

Fernandes and Kraay (2007) chose firm-level datasets from two main sources, the World Business Environment Survey (WBES) and the World Bank Investment Climate Surveys (PICS) to study the relationship between different types of institutions and economic performance at the firm level. They used the firms' perceptions about the quality of the courts in capturing "contracting institutions" and their views on how corruption captures "property rights institutions". It captures perceptions of the likelihood that property will be expropriated by the state, the likelihood that contracts will be enforced, and the likelihood that property is secure from crime, and so on. Their research shows that countries with poor contracting and property rights institutions according to the cross-country measures also have poor functioning of the judiciary and corruption as a major obstacle to business according to the WBES and PICS firm-level measures. Moreover, there is another widely-used measure of "rule of law" produced by Kaufmann, Kraay, and Mastruzzi (2005). They combine information from a large number of cross-country sources measuring perceptions of governance and construct composite indicators summarizing these perceptions. The Rule of Law measure in particular captures the perceptions of individuals, firms, commercial risk rating agencies, NGOs, think-tanks, and multilateral development banks on issues relating to the protection of property.

5.3.1.1 The evaluation of different data sources

In practice, a common difficulty in conducting a social research in China is the scarcity of reliable data (Luo, 1995). There are a number of governmental and non-governmental organisations who have conducted the surveys that are related to the aims and objectives of this research. The Freedom House (FH) is the representative of non-governmental organisation

having its own indicators, e.g. Freedom in the World Survey and Freedom of the Press Index. The FH has published its survey reports annually, but its indicators concentrate on a relative narrow area and can only cover the part of the research questions related to the institutional constraints, such as freedom and corruptions. Therefore, there are three reasons that the author cannot choose the FH data. The first reason is the FH data is all about the institutional constraints at a macro level and cannot directly reflect the constraints on business performance at a firm level. The second one is the selection of the FH data will have to bring in another data source about the institutional constraints at a micro level, and the combination of different data sources unavoidably causes new methodological problems. More seriously, the FH is a non-governmental organisation, and its survey is not officially approved by Chinese government. In China, the unauthorised evaluation related to the operation of Chinese government or the behaviour of Chinese officials can be regarded as illegal and criminal offence. Hence, it is too politically sensitive for any non-official approved survey to be legitimately authorised in China.

There are some surveys involved by Chinese organisations. Among them, the Business in China Survey provided by China Europe International Business School was recommended by several European organisations, i.e. China-Italy Chamber of Commerce. This survey mainly focuses on market environment, innovation, research & development, and intellectual property in China. The US-China Business Council has also done a survey named USCBS China Business Environment Survey, which addresses ten issues regarding business operation in China. The constraints are human resource, administrative licensing, competition with Chinese enterprises, cost increases, intellectual property rights enforcement, uneven local enforcement and implementation of laws and policies, investment restrictions, competition with foreign companies, competition with foreign or Chinese companies not subject to US Foreign Corrupt Practices Act, standards and conformity assessment, and etc. However, because of the same political reason, these surveys all tried to avoid the evaluation of the Chinese government and officials' behaviours, particularly such as corruption. It is therefore difficult for the author to select these surveys in an institutional study.

For the governmental organisations, the World Bank is the most famous governmental data sources, as they carry out the WBES and the Enterprise Surveys (ES). Originally, the World Bank conducted with the Enterprise Survey Organization of Chinese National Bureau of Statistics in 2001. The first survey covered 300 firms in each of five cities: Beijing, Tianjin, Shanghai, Guangzhou, and Chengdu, for a total of 1500 firms. The survey collected detailed

information on financial statements, and different aspects of corporate governance, financing, firm-government relationship, innovation, technology, labour, and so on. As this survey did not include the informal institutional data and only covered five better developed cities in China, the author does not choose this survey.

The ES began in 2002 and were conducted by different units of the World Bank. Since 2005-2006, most data collection efforts have been centralized within the Enterprise Analysis Unit. Centralization of the survey implementation has resulted in a unified set of core survey questions and a consistent application of survey methodology across countries. The strata for Enterprise Surveys are firm size, business sector, and geographic region within a country. Firm size levels are 5-19 (small), 20-99 (medium), and 100+ employees (large-sized firms). The manufacturing and services sectors are the primary business sectors of the ES, and registered companies with 5 or more employees are targeted for interview. Services firms include construction, retail, wholesale, hotels, restaurants, transport, storage, communications, and IT. The Enterprise Surveys Unit uses two instruments: the Manufacturing Questionnaire and the Services Questionnaire. The standard Enterprise Survey topics include firm characteristics, gender participation, access to finance, annual sales, costs of inputs/labour, workforce composition, bribery, licensing, infrastructure, trade, crime, competition, capacity utilization, land and permits, taxation, informality, business-government relations, innovation and technology, and performance measures. Over 90% of the questions objectively ascertain characteristics of a country's business environment. The remaining questions assess the survey respondents' opinions on what are the obstacles to firm growth and performance.

The ES is answered by business owners and top managers. Sometimes the survey respondent calls company accountants and human resource managers into the interview to answer questions in the sales and labour sections of the survey. Officially announced by the World Bank, over 120,000 firms in 125+ countries have been currently surveyed in the ES, and an ES is conducted about every 3-4 years for most countries. However, the ES of China only was conducted once in 2004 and published in 2005, which was also called the PICS.

There are three reasons that the author cannot use the ES. First of all, according to the official explanation of ES methodology, the firms with 100% government/state ownership are not eligible to participate in ES. In other words, the ES does not cover the firms with 100% government/state ownership. In this research, a number of hypotheses concentrate on the

difference of the business constraints on the firms with or without government/state ownership. The author seeks to find how the constraints influenced by the governmental involvement affect the firms' business performance. A firm's government/state share can range from 1% to 100%. Without full state owned firms, the dataset itself is not sufficient for research exploration. Eventually, it becomes impossible to provide a convinced investigation about the institutional constraints on the business performances of the private firms (without government ownership) and non-private firms (with government ownership) in China.

The second reason is WBES "primarily collected **perception data** regarding constraints and some information on firm performance" (Aterido et al., 2009: 7). Nevertheless, these perception data is not widely available in the ES. This thesis's theoretical foundation is NIEs, and it is necessary to have a collection of perception data to clarify the relationship between formal and informal institutions and their connections. The WBES can mostly fulfil this request.

The third reason is the ES concentrates on the firms' business performance data for the uses of accountants when filling in a financial statement, such as the business income, business expenses, and profits. It is thus not appropriate for this study because, for the business performance data at the firm level, the ES does not include the investment data and only report the income and profits, which cannot reflect the business operation as a whole. This is especially true for the firms with foreign ownership, because of the strategies of the foreign investors, such as transfer price and other means to avoid tax and to increase their real profits. In China, the business environment has provided mixed inducements on transfer pricing. On one hand, the policy of a low income tax rate and a host of tax incentives would induce FDI to locate their source of profits in China. On the other hand, the regulations on foreign exchange control provide incentives for foreign investors to speed up the outward flow of profits from China.

Transfer prices are the prices that MNCs set for intra firm exports and imports across countries (Lecraw, 1985; Gray, 1993), which are different from the market prices used for transactions with unrelated units. The motivation of transfer pricing is to maximize the foreign owners' global profit and minimize the total costs by avoiding or reducing taxes and tariffs in their home and host countries where their subsidiaries operate. The principal tools consist of under-invoicing (underpricing) the exports and over-invoicing (overpricing) the imports of the host country. Many factors may influence the transfer pricing manipulation. These include tax rates and tariffs at home and host countries, import or export restrictions, foreign exchange control,

restrictions on the repatriation of profits, joint-venture partners' capabilities to manage and influence the pricing policies and practices, taxation (or customs) authority's expertise and ability to detect and prevent transfer pricing. In general, a large international differential in taxes and tariffs would encourage the FIEs to use transfer prices to reduce tax payments and tariff duties. In addition, business environment factors such as restrictions and regulations on imports, exports and foreign exchange control, can also stimulate the FIEs' incentives to manipulate transfer pricing to avoid business risks and institutional transaction costs.

The business environment in China may strengthen the motivation to use transfer prices to minimize business risks, unpredictability and transaction costs. Although the Chinese government has made great efforts to establish a legal framework for FDI and to liberalize the economy, there are still some legal and institutional factors negatively affecting the operation of FIEs. First, the lack of well-defined laws on property rights and foreign investment protection is a major concern of foreign investors. In many cases, the property rights in enterprises are not legally clear. As a result of a poor legal environment, foreign investors tend to transfer their income to low-risk countries by manipulating transfer pricing. Second, a number of restrictive regulations, such as foreign exchange control, withholding tax on profit repatriation and restraints on FIEs' access to the domestic markets, increase the business risks and relevant transaction costs. These restrictions motivate MNCs to use transfer prices in order to shift their income to countries with less restrictions. Another important factor that deserves special attention is the ownership structure of FIEs in China. In fact, joint ventures and cooperative joint ventures are the principal forms of FIEs. Theoretically, both sides share profits, costs and management. In practice, however, as the interests and management goals are divergent between the two sides, each side is motivated to maximize its own interest and benefit. To reduce the profits accruing to local Chinese partners and to increase their own real profit share, MNCs have a high propensity to manipulate transfer pricing to shift profits to their parent companies or other subsidiaries located in other countries with low taxation and risks. As a result, by using transfer prices foreign investors undervalue the exports and overvalue the imports, the FIEs shift profits out of China, resulting in FIEs' trade deficits and income loss (Sun, 1999).

Shulman (1969) contended that transfer pricing might be determined by customs duties and tax differentials, fluctuation of exchange rates, and market information of the local subsidiary. Lecraw (1985) also found that the transfer pricing was to reduce customs duties and taxes, and to circumvent governmental control prices and capital-profit remittance controls. Besides the

major economic factors including the difference of tax and customs duties and the fluctuation degree of the foreign exchange rate, "inflation, subsidiary market information, nationalization and expropriation risk, competitive market factors, profit-dividend remittance controls, import restraints in the host country, profit maximization within the corporate family, and correct performance measurement of the subsidiary could be determinants of the international transfer pricing method" (Kim, 2007: 179). Moreover, Feenstra and Hanson (2002) note that a multinational firm engaging in international trade may be better able to transfer price, and higher taxes can act as an important incentive to attract the FIEs in China, particularly when the multinational also controls input purchases and can dictate the input prices. Thus, it is not convincing to use the data of income and profit to describe the firms' business performance, especially the firms that are invested in by foreign owners. If selecting the data of business performance in the ES, the author still has to choose the investment data from the difference source to measure the growth of the firms in China, and that will cause another problem in research methodology.

The fourth reason that the author cannot choose the ES in this research is the ES actually covers a similar area of that of the WBES, and it can be regarded as a simplified format of the WBES. The ES covers eight aspects about the business environment, including infrastructure, access to finance, labour market, corruption & regulatory burden, court & crime, innovation & technology, and trade. The WBES displays the questions about the nine areas, i.e. financing, infrastructure, policy instability, inflation, exchange rate, street crime, organised crime, taxes & regulation, and corruption. Apart from these general constraints, there are also survey questions about several specific constraints in the WBES. Compared with the ES, the WBES concentrates on the questions about the institutional constraints on the firms' performance, and the questions related to the specific institutional constraint are also surveyed.

5.3.1.2 The WBES as data source

5.3.1.2.1 The introduction of the WBES

Followed by the data source used by Beck et al. (2005), this research uses the WBES to examine institutional factors that may impede a firm's activity. The WBES was implemented by the Gallup Organization in East Asia, Pakistan, Latin America, and OECD countries; AC Nielsen in Eastern Europe and Turkey; the Confederation of Indian Industries in India; the Harvard Center for International Development in Africa; the Egyptian Center for Economic Studies in Egypt;

Lidee Khmer in Cambodia; the University of the Chamber of Commerce in Thailand; and the Bangladesh export development project in Bangladesh (Batra et al., 2003).

Table 5.1 Distribution of Firms by Region, Size and Sector

	Manufacturing	Services/ Commerce	Agriculture	Construction	Other	Total Firms
Africa						
Small	16.7%	28.9%	5.7%	24.2%	24.4%	508
Medium	30.1%	26.8%	8.0%	16.3%	18.8%	485
Large	36.6%	25.4%	8.7%	14.0%	15.4%	358
Total	26.8%	27.2%	7.3%	18.7%	20.0%	1351
MENA						
Small	60.0%	20.0%	0.0%	8.9%	11.1%	45
Medium	31.6%	35.5%	6.6%	7.9%	18.4%	76
Large	31.0%	41.4%	8.6%	8.6%	10.3%	58
Total	38.5%	33.5%	5.6%	8.4%	14.0%	179
East Asia/NIC China						
Small	41.0%	49.3%	1.5%	8.2%	0.0%	134
Medium	55.1%	37.1%	1.1%	6.7%	0.0%	89
Large	53.8%	38.5%	0.0%	7.7%	0.0%	78
Total	48.5%	42.9%	1.0%	7.6%	0.0%	301
East Asia Dev						
Small	36.4%	54.5%	3.5%	5.6%	0.0%	536
Medium	48.7%	45.5%	1.1%	4.7%	0.0%	279
Large	68.8%	28.1%	3.1%	0.0%	0.0%	128
Total	44.4%	48.3%	2.8%	4.6%	0.0%	943
South Asia						
Small	50.0%	40.6%	0.9%	8.5%	0.0%	106
Medium	63.4%	22.6%	2.7%	11.3%	0.0%	186
Large	79.2%	12.3%	1.9%	6.6%	0.0%	106
Total	64.1%	24.6%	2.0%	9.3%	0.0%	398
Latin America						
Small	36.4%	53.6%	2.0%	8.1%	0.0%	459
Medium	45.1%	47.1%	1.5%	6.3%	0.0%	669
Large	53.4%	38.5%	3.5%	4.6%	0.0%	481
Total	45.1%	46.4%	2.2%	6.3%	0.0%	1609
OECD						
Small	21.7%	64.5%	1.3%	12.6%	0.0%	318
Medium	30.3%	60.2%	1.0%	8.2%	0.3%	389
Large	33.5%	63.5%	0.6%	2.4%	0.0%	167
Total	27.8%	62.4%	1.0%	8.7%	0.1%	874
CIS						
Small	20.8%	63.5%	4.4%	8.2%	3.1%	903
Medium	49.3%	34.7%	5.7%	6.6%	3.7%	683
Large	60.3%	27.0%	6.3%	5.2%	1.1%	174
Total	35.8%	48.7%	5.1%	7.3%	3.1%	1760
CEE						
Small	21.9%	60.6%	7.2%	9.9%	0.4%	718
Medium	29.2%	27.7%	30.2%	12.9%	0.1%	902
Large	54.3%	12.4%	28.7%	4.7%	0.0%	129
Total	28.0%	40.1%	20.6%	11.0%	0.2%	1749

Source: Brata et al. (2003)

Both small and medium enterprises (SMEs) (those with 500 or fewer workers) and large firms (those with 501 or more employees), were sampled in the WBES. Table 5.1 presents the regional breakdown of firms by size and sector. SMEs comprised the clear majority of samples (80 percent), with an almost equal proportion of small enterprises (50 or fewer employees) and medium enterprises (51-500 employees). Large firms accounted for about 20 percent of the sample. In terms of average firm age, the youngest sample age of firms was in Central and Eastern Europe (9.5 years). The oldest was in OECD (34.1 years).

Table 5.2 Leading constraints of the WBES

	Leading Constraint	**Second Constraint**	**Third Constraint**	**Fourth Constraint**
World	Taxes and regulations	Financing	Policy instability	Inflation
OECD & newly industrialized East Asia (including China)	Taxes and regulation	Financing	Policy instability	Inflation
Transition Europe	Taxes and regulation	Financing	Inflation	Policy instability
Developing countries (Africa, MENA, East Asia Developing, South Asia, Latin America)	Corruption	Inflation	Financing	Policy instability/ infrastructure (tie)
Africa	Financing	Corruption	Infrastructure	Inflation
MENA	Policy instability	Corruption	Inflation	Exchange rate
East Asia NIC/China	Financing	Inflation	Anti-competitive practices	Policy instability
East Asia Developing	Street crime	Corruption	Inflation/Exchange rate/organised crime (tie)	
South Asia	Corruption/policy instability (tie)		Inflation	Infrastructure
Latin America	Taxes and regulation	Policy instability	Street crime	Financing
OECD	Taxes and regulation	Financing	Policy instability	Inflation
CIS	Taxes and regulation	Financing	Policy instability	Inflation
CEE	Taxes and regulation/ Inflation (tie)		Financing	Policy instability

Source: Brata et al. (2003)

The WBES also provides the rated responses about how a set of general constraints were problematic for business growth and operation. Table 5.2 presents the ranking of responses for the world, by regional groups and by individual region to the following question, "please judge on a four-point scale how problematic are the following factors for the operation and growth of your firm". Based on a simple average for the overall world sample, four constraints are, taxes and regulations, financing, policy uncertainty/instability and inflation. Some crucial differences appear across regions, and particularly between industrialized and developing countries. For OECD, newly industrialized East Asian countries, and transition economies, the leading obstacles are taxes and regulations, financing, policy instability, and inflation. For developing regions as a group (Africa; Latin America and the Caribbean, LAC; Middle East/North Africa, MENA; South Asia; and East Asia), the leading constraint is corruption, followed by inflation, financing, policy instability, and infrastructure. In four developing regions, South Asia, Africa, developing East Asia and MENA, corruption is one of the top three constraints.

There are other important regional differences. For example, in Developing East Asia, street crime imposes the leading constraint, whereas in Africa, infrastructure problems are one of the top three constraints. In Central and Eastern Europe (CEE), inflation ties with taxes and regulations as the leading constraints. The large variance across regions in the severity assigned by responding firms to the various constraints points to the importance of assessing the results by region and country. For Africa and East Asia, taxes and regulations are notably absent from the leading constraints. Surprisingly, in Transition Europe (CIS and CEE), corruption is not among the top four constraints although it is problematic for about half the firms. Tax and regulatory constraints were also rated individually in a separate question. Among these constraints, "high taxes" led in every region. Since taxes are generally a significant cost of doing business, it is not surprising that most businesses internationally regard them as too high. "Tax regulations and administration" led the remaining list of regulatory constraints. Customs and trade regulation were identified as the next leading regulatory constraint in Latin America, Africa, Developing East Asia, and MENA; while in OECD, South Asia and Newly Industrialized East Asia labour regulations rank next. In Central and Eastern Europe alone, business registration imposes the leading constraint after taxes. It is noteworthy that the great majority of firms in Newly Industrialized East Asia did not identify high taxes as a serious constraint, and were predominantly not seriously constrained by any category of regulation.

5.3.1.2.2 The reasons to select the WBES

The WBES that was also conducted by the World Bank uses quantitative techniques to carry out the survey over a period of roughly 20 months between the end of 1998 and the middle of 2000. "The design of the sampling frame reflected several considerations. In general, the sample aimed to reflect the relative importance of manufacturing firms versus service and commercial firms in the economy - To ensure representative findings across countries, a sample frame was developed for most countries to reflect the distribution of privately own companies in each country by sector, size (measured by number of employees), and location - Each consulting firm hired to conduct regional surveys used desk research to generate a suitable sample frame, the primary research source being government registers of enterprises that are maintained by most of the countries under review. To ensure adequate representation of firms by industry, size, ownership, export orientation, and location, the following sampling targets were agreed on across all regions:

- Sectoral composition: The number of manufacturing versus service companies were allocated according to their contribution to gross domestic product (GDP), with a 15 percent minimum for each type of firm.
- Size: At least 15 percent of the sample was in the small category (fewer than 50 employees) and at least 15 percent was in the large category (more than 500 employees).
- Ownership: At least 15 percent of the companies in the sample were firms with foreign control (where the law prohibited such a control arrangement, the companies had substantial foreign ownership).
- Exporters: At least 15 percent of firms exported at least 20 percent of their output.
- Location: At least 15 percent of firms were located in small towns (a population of less than 50,000), or in the countryside" (Batra et al., 2003:2-3).

The WBES's cross sectional data were collected though personal interviews conducted with managers in enterprises in China. **The WBES includes categorical data and scaling data.** The categorical data surveys the questions about the general nature of the firms, such as "Does the firm include foreign ownership, Yes or No?" and "Does the firm include government ownership, Yes or No?" The scaling questions survey the constraints in different categories, including business competition, finance, rules and regulations, corruption, and judicial function.

There were 101 enterprises taking part in the WBES in China. Subject to the sample size, the standard error of a reported proportion or percentage (p) measures its accuracy, and is the estimated standard deviation of that percentage. It can be estimated from just p and the sample size (n), if n is small relative to the population size, using the following formula: The general formula for the margin of error for a sample proportion is

$$z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}},$$

Where $\hat{p}$ is the sample proportion, n is the sample size, and z* is the appropriate z*-value for your desired level of confidence. For 95% of confidence level, the z value is 1.96. The table 5.3 lists the survey errors related to the primary WBES data in this research.

Table 5.3 Survey Errors of the primary research data

Constraint category	Response Rate	Survey Error
Competition	79.2%	8%
Finance	69.3%	9%
Rules and regulations	75.2%	8%
Corruption	92.1%	5%
Judicial function	84.2%	7%

Note: Response rate is based on the constraint with the lowest response rate in one constraint category. The response rates of other constraints in the same category are all higher than the figure listed in the table.

Compared with the other data sources that are officially approved by the Chinese government, such as the ES, the WBES has a number of advantages. **The most important one is**, according to the official explanation of ES methodology, the firms with 100% government/state ownership are not eligible to participate in ES. As a result, the ES does not cover the firms with 100% government/state ownership. However, the target firm categories of this thesis are the firms with / without foreign ownership and the firm with / without government ownership. In order to answer the research question, it is essential to choose the WBES as the research data source and abandon the others, such as the ES. The WBES has answered the following areas ":

- To provide feed back from enterprises on the state of the private sector.
- To measure the quality of governance and public services including the extent of corruption.
- To provide better information on constraints to private sector growth, from the enterprise perspective.
- To sensitize client governments to the importance of listening to firms and using this information to critically assess policies.

- To establish the basis for internationally comparable indicators which can track changes in the business environment over time, thus allowing an assessment of the impact of market oriented reforms on private enterprises.
- To stimulate systematic public-private dialogue on business perceptions and the agenda for reform" (Batra et al., 2003: 3).

The second important advantage of the WBES for this research is, for the first time, China agreed to be a part of this type of survey. Data were collected though personal interviews conducted at the managerial level in enterprises in most regions, with the exception of Africa, where surveys by mail predominated. Response rates were generally high, with the exception of responses to questions on bribery. On a roughly parallel basis, the WBES implement a standard core enterprise survey to evaluate business conditions in a large, cross regional set in all 80 countries throughout the world. It uses a consistent methodology and parallel parameters to survey at least 100 firms in each country. The WBES assesses the state of the enabling environment---the conditions for private enterprise growth, focusing on local economic policy, governance, regulatory, infrastructure and financial barriers, and services to businesses. The WBES has also standardised the evaluations of the conditions for private investment in developing and transition countries around the world. It provides a basis to make regional comparisons of investment climate and business environment. Furthermore, it permits comparisons of the severity of constraints affecting enterprise depending on their characters, such as size or ownership. For example, the WBES categorises firms by foreign or domestic ownership. In China, domestic firms are constrained in the area of regulations, as they are not satisfied with business and labour regulations and constraints on taxes and regulations. Thus indicating that there are more constraints for domestic firms than for foreign firms and on the issue of financing constraint substantially and corruption. Moreover, the legislative and regulatory superiority has apparently created a business environment that is more welcome to the FIEs than to domestic firms.

To apply the NIEs theories, the data must represent a wide variety of issues. **The third reason** for the author selects the WBES is the WBES instrument is broad in its coverage and includes information on business environment attributes and firm level attributes including information on firm size; years of operation, sales, debt and growth performance, ownership nature and source of finance. There are also evaluations on issues such as corruption and governance, the regulatory regime, economic policy predictability, the nature of competition, public service

delivery and government bureaucracy, the judicial system, banking system, financing and general constraints to business operation. Based on face-to-face interviews with managers and owners, the WBES is designed to generate comparative measurements in such areas as corruption, judiciary, lobbying, and the quality of the business environment, which can then be related to specific firm characteristics and firm performance.

Fourth, the WBES focuses on perceptions of factors external to the firm as the perception is very important to investigate the institutions, especially the institutional changes. Many dimensions of business environment were surveyed, ranging from perceptions of the national business environment as shaped by local economic policy; governance to the perceptions of regulatory, infrastructural, and financial impediments; and public service quality. The survey was done on more than 100 firms in each of some 80 countries. It is to be indicated that the WBES is, so far, the most comprehensive survey conducted in this area by an international agency in cooperation with Chinese governments. It is also the best publicly available survey about business operation in China. This was another important factor behind the author's reliance on the WBES to finalise this business study, rather than on carrying out a completely new survey.

The fifth reason is the cost of conducting such a survey is beyond the ability of the author. The problems are linked mostly to the nature of this research and to some of the questions it raises, particularly with regard to political related questions for the Chinese Communist Party that controls China, e. g. corruptions of the officials and the evaluation of the governmental behaviours. More seriously, it is most likely for a researcher to face some offences because of the corruption data collection in China. As managers regard such question as extremely sensitive to their activity and hence confidential, the collection of information requires a long time in order to build trust. Such problems have already been acknowledged by some observers (Knack and Keefer, 1995; Voigt and Engerer, 2000; Punch, 1994). Interviewees in China are thus not comfortable with such matters. This makes a direct data collection very difficult. The human, financial and political resources of the World Bank are difficult to match as the WBES provides panoply of different firms that embody different characteristics that are crucial to test this research's hypotheses.

Sixth, the subjective views expressed in these surveys are dependent on the questions' reliability and validity. However, these problems are common to all researches which are based

on surveys that rely on the expressed opinions of agents. Notwithstanding, the questionnaire reduces the biasing errors that might result from the personal characteristics of interviewers and their understandings to the questions asked in the survey especially when the questions are simple and straightforward. In addition, the assurance of the anonymity with the questionnaire is especially helpful when the survey deals with sensitive issues like those treated by this research. Although individual existence most bounding up with problems of personality is situated at a micro level, it is still possible to collectively transform phenomena outside apart from being influenced by social environment of a macro level (Touraine, 1974). Hence, a quantitative approach based on WBES survey should be appropriate for this research.

As a well accepted database, the WBES could thus contribute the proposed research to investigate the business constraints on the firms' performance in China. Choosing the WBES data, the proposed study consists of a quantitative model design, quantitative hypotheses measurement, statistical analysis, and the adoption of survey data, to establish a framework to understand the nature of institutions and to get a model so that we might predict and control it (Yu, 2003).

5.3.2 Statistical tests for research hypotheses

5.3.2.1 The Levene's test and Error bar

Table 5.4 Statistical tests in this research

Hypotheses		**Methods**
The importance of the institutions on different firm categories		Descriptive test
Insider-Outsider hypotheses	Firms with and without foreign ownership	Levene's test and Error Bar
	Private firms and non-private firms	
Business performance hypotheses	Direct influences on sales and investment of the of the firms caused by institutional constraints	Regression analysis: 1. Logistic regression 2. Categorical regression

The author chooses a set of statistical techniques to test the research hypotheses (table 5.4). The Levene's test is used to test the proportional differences in the perception amongst these categories with respect to their respective constraints (Miller and Graeffe, 2000; Hsieh and Miller, 1990). "In 1960 Professor Howard Levene proposed a new approach to this problem by applying the F-test to the absolute deviations of the observations from their group means. Levene's approach is powerful and robust to non- normality and became a very popular tool for

checking the homogeneity of variances" (Gastwirth et al., 2009: 343). The Levene's test does not only rely on similarity of the number of observations across the groups, but also examines discrepancies between categories with small proportion of observations. The Error Bar technique is used to display the direction of the differences, i.e. which one of the two categories values higher the constraint. The Error bar is to give an idea about the homogeneity of perception within the same category, i.e. whether all observations in the same category value the constraint with the same intensity (Mayer et al., 2004). The author employed these techniques to analyse complex survey data of the WBES as "it is common for survey analysts to apply descriptive analysis techniques … … to survey variables measured on scales that are not strictly continuous" (Heeringa et al., 2010: 120).

Supported by SPSS, the Levene's test investigates the differences in the proportional perceptions between the different categories reported by firms. It is preferred over other parametric and non parametric techniques such as Mann-Whitney U test (non-parameteric) and ANOVA test (parametric) because the Levene's test is more flexible and safer to use when comparing groups having large disparities in the size of the number of observations. This is the exact case for the size categories investigated. It is also useful and appropriate when comparing between categories with small number of observations because the sample of this research only includes 34 firms in China. More importantly for this study, Levene's test does not depend on the assumption of normal distribution of data (Milliken and Johnson, 1984; Zimmerman, 2004; Hsieh and Miller, 1990). The Levene's test for homogeneity is also useful because the author is more concerned with testing the performance differences in the proportion of perception among the different categories regarding to the constraints, rather than testing whether or not a specific constraint is problematic for different groups. Together with Levene's test, the Error Bar is to exhibit which of the compared categories value the business constraint most. The use of this technique enables the author to give a good indication about the variability in the opinions even within the category itself (Brace and Snelgar, 2000). The application of descriptive analysis (means, proportions, and totals) and linear regression intend to illustrate the model of multivariate relationships.

5.3.2.2 The regression analysis

Regression analysis has been widely used in business studies, particularly in the subjects connected with the FIEs' business operation of in China. Luo (1995) uses three dependent

variables to explain the development of joint ventures in China, which are stock market related measures, market structure measures, and business strategy variables. Ng and Tuan (2002) studied the institutional differences or structural characteristics of investments. Their research examines six variables in building a FDI-friendly environment, which are (1) nature of industry; (2) size of investment; (3) sources of investment; (4) destinations investment by regions; (5) type of ownership; and (6) expectations on profit performance. Furthermore, Tuan and Ng (2004) explored the business constraints on regional FDI absorption at the city level, and they choose four indicators: residents' income, the strength of the manufacturing base, the degree of urbanization by physical infrastructure, and the city's relative wage level to the overall average wage. In terms of Guanxi that uses the connections or networks to secure favours in personal or business relations, Luo (1997) again used a general linear model to explore the influences of informal institutions on FIE performance in China.

Following the approach used by Ghecham (2004) and Beck et al. (2005), based on the data of the WBES, the author uses regression analysis to investigate the hypotheses about the influences caused by both the institutions on the firms' business performance in China, in terms of sales and investment. As a statistical investigation of relationships between variables, regression techniques have long been central to the field of economic studies. Usually, regression analysis is used when the investigator seeks to ascertain the causal effect of one variable upon another. To explore such issues, the scholar collects data on the underlying variables of interest and employs regression to estimate the quantitative effect of the causal variables upon the variable that they influence. The scholar also assesses the "statistical significance" of the estimated relationships, which is the degree of confidence that the true relationship is close to the estimated relationship.

The assumption of normal distribution of research data determines the choice among several regression tools. A normal distribution is a statistical distribution in which data are represented graphically by a symmetrical bell-shaped curve, with the highest frequency in the middle and smaller frequencies towards the edges. Thus, technically speaking, checking the normality of the distribution of a variable is very important because many statistical tests require the normality as a prerequisite. Among the variables in this study, the age of the firms is the only one factor using numeric value. Reasonably, it is very necessary to ensure the normality of the distribution of the firm age factor. Shown in table 5.5, the result of Shapiro-Wilk test is $0.000 < 0.05$ proving that the variable of firm age is not normally distributed. Moreover, it is very obvious that the

data of the firm age is not normal distributed (Graph 5.1 and Graph 5.2). Consequently, this research has to abandon the option of most linear regression approaches when using the original data of firm age from the WBES. Instead, the author has to use the other statistical tools without the assumption of normal distribution.

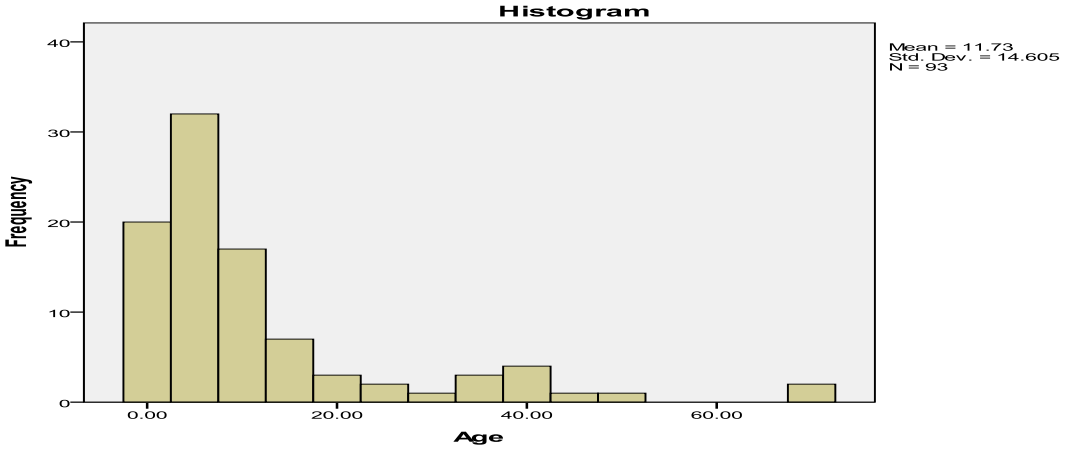
Table 5.5 Result of Normality test of firm age

Tests of Normality

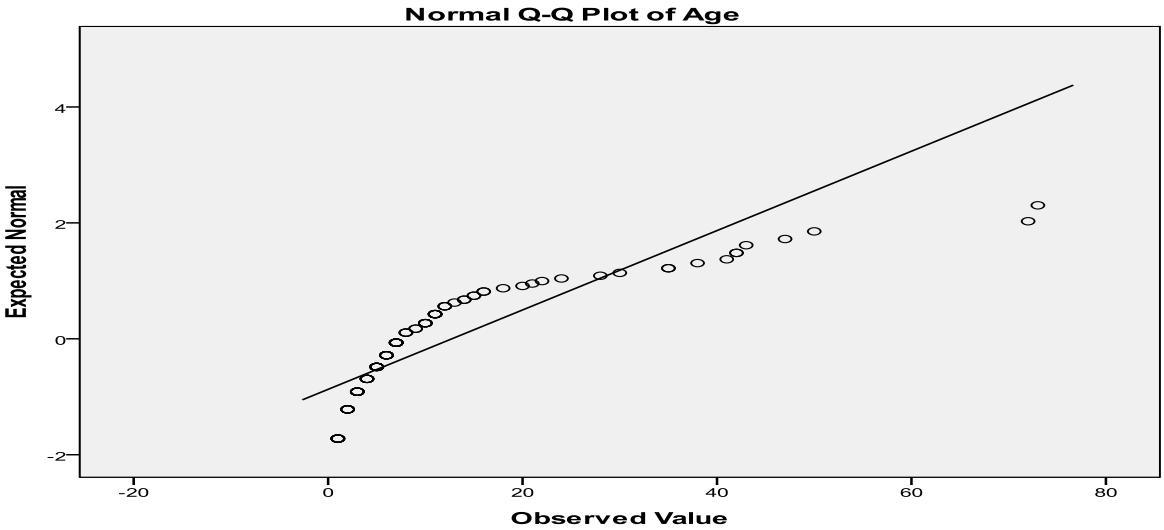
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age	.251	93	.000	.712	93	.000

a. Lilliefors Significance Correction

Graph 5.1 Histogram of firm age



Graph 5.2 Plot of firm age



Accordingly, a statistical technique used to investigate the influence on the firms' business performance is categorical regression (Ghecham, 2004; Beck et al., 2005), such as sale and investment. Categorical variables serve to separate groups of cases, and the technique estimates

separate sets of parameters for each group and it is not dependent on the assumption of normality of the variables (SPSS, 1998). Regression analysis applies the optimal scaling methodology to quantify categorical variables. This includes the response variable, simultaneously optimising the multiple regression coefficients, allowing for nonlinear transformation of the variables, and including the response variable (Van der Kooij et al., 2004). This statistical technique does not depend on normality assumption and is available in SPSS programme (SPSS, 1998). Therefore, categorical regression is appropriate for the assessment of the different variables in this research, which are categorised on different scales (ordinal scale for dependent variable, size and institutional constraints, nominal scale for sector, and numeric scale for age of the firms), for the type of testing investigated by this study and for the type of variables used in this study (table 5.6). This technique allows investigating the causal relationship between the institutional variables; the relationship with the dependent variable that refers to the performance of the firms measured by sales and investment achieved during the last three years preceding the survey; the impact on the business performance of the firms caused by the formal and informal institutions in the WBES, including corruption constraint, legal constraint, financial constraint, business competition constraint, rules and regulations constraint.

Table 5.6 The categorical regression variables

Variables		Reason of adoption in this research
Dependent variables	Sales growth percentage change	To use them as proxies for the business performance of the firms in China.
	Investment percentage change	
Independent variables	Business competition	As a formal institutional constraint, it is a crucial factor to influences the business performance in competition.
	Finance system	As a formal institutional constraint, it is an important factor in business environment. It contributes actively to business transactions exchanges.
	Rules and regulations	As a formal institutional constraint, it sets a formula to business performance in practice and affects daily business operations in China.
	Corruption	As an informal institutional constraint, It can have both positive and negative effect on the business performance. It can either increase the transaction costs of business exchanges normally, or reduce business costs sometimes.
	Legal system	As a formal institutional constraint, it is a determinant for generalising trust and impersonal transactions across actors. It plays a major role in providing third party enforcement mechanism to the exchange process. It can increase or decrease transaction costs.

However, although the categorical regression is able to answer a large part of research questions, it cannot provide to what extent the outcomes can be predicted. In other words, no matter if the statistical relationship is significant or not significant, we have no idea about when the probability of the predicted outcome will happen. Among the several choices of regression analysis that are independent of normal distribution, logistic regression is an approach for prediction, like Ordinary Least Squares (OLS) regression. With logistic regression, the researcher is predicting a dichotomous outcome. This situation poses problems for the assumptions of OLS as the error variances are normally distributed. Logistic regression analysis extends the techniques of multiple regression analysis to research situations in which the outcome variable is categorical. Technically speaking, logistic regression is good at dealing with the dependent variable that is binary rather than continuous, which is usually a categorical variable that has to values, such as "yes" and "no". In fact, the data of the WBES involves a large number of categorical outcomes. More importantly, the WBES provides the previous and future sale and investment data, in the context of "change" or "no change".

In this thesis, the section of regression analysis is similar to the multilevel empirical research design of Boyacigiller (1990). The main difference between this research and Boyacigiller's study (1990) is, in the second part of regression analysis, the author uses categorical regression instead of multiple regressions because the WBES data is not normally distributed. In the first step of regression analysis, the author chooses logistic regression to examine the same independent data used in the categorical regression. The binary logistic regression can explain to what extent the regression outcomes will happen, and whether the independent variables will result in the changes of business performances in China. The dependent variables are "change" and "no change" of the sale and investment both in previous three years and in future three years. The independent variables are the same ones used in the second step of regression analysis, which are categorised on a different scale (ordinal scale for dependent variable, size and institutional constraints, nominal scale for sector, and numeric scale for age of the firms).

The author notes that the operational problems when running regression analysis, such as the omission from a regression of some variables that affect the dependent variable may cause an "omitted variables bias". The problem arises because any omitted variable becomes part of the noise term, and the result may be a violation of the assumption necessary for the minimum sum of squared errors criterion to be an unbiased estimator. The omitted variables problem is troublesome to investigators not simply because it requires them to collect data on more

variables to avoid it, but because the omitted variables are often unobservable and may also become unavoidable. For an investigator concerned primarily with the coefficient of the gender dummy, the omitted variables bias caused by the exclusion of innate ability and motivation should be modest because the correlation in the sample might plausibly be assumed to be small. Where the problem appears likely to be serious, by contrast, the utility of conventional regression as an investigative tool diminishes considerably.

The other running difficulty is "multicollinearity" that usually refers to a problem in the data short of the perfect collinearity in the illustration, but where changes in two variables are nevertheless highly correlated to the point that it is difficult to separate their effects. Because multicollinearity does not go to any property of the noise term, the minimum sum of squared errors criterion can still be unbiased, consistent, and efficient. But the difficulty in separating the effects of the two variables introduces greater uncertainty into the estimator, manifest as an increase in the standard errors of the coefficients and a reduction in their t-statistics. The multicollinearity problem does not result in biased coefficient estimates, but does increase the standard error of the estimates and thus reduces the degree of confidence that one can place in them. The difficulty arises when two independent variables are closely correlated, creating a situation in which their effects are difficult to separate. As a result, running regressions requires testing for multicollinearity, which is a common problem in regressions procedures. This problem can generate erroneous coefficient estimates and hence leads to misleading conclusions about the potential effect of the independent variables on the dependent variable. A common method to identify the potential presence of this problem is to run a correlation matrix amongst the independent variables to see whether there is high and significant correlation between them.

Theoretically, the fact that the parameter is "statistically significant" simply means that by conventional tests, one can reject the hypothesis that its true value is zero. But there are surely many other hypotheses about the parameter value that cannot be rejected, and indeed the likelihood that regression will produce a perfectly accurate estimate of any parameter is negligible. About the only guidance that can be given from a statistical standpoint is the obvious--- parameter estimates with proportionally low standard errors are less likely to be wide of the mark than others. Ultimately, statistics itself does not say how much weight a regression study ought to be given, or whether it is reasonable to use a particular parameter estimate for some legal purpose or other. These assessments are inevitably entrusted to the researchers, whose judgments on the matter if well informed are likely as good as those of anyone else.

5.4 Other methodological limitation

The questionnaire data collection of the WBES has four major disadvantages. First, compared with the numerous numbers of the enterprises in China, the sample size is so small that the results of data analysis and research conclusion become less convincing. However, subjective to the availability of survey data, especially related to the topic of corruption that is still politically sensitive area in China, the WBES is still the best option to conduct this institutional research. Larger samples and the availability of panel surveys would have increased the ability to draw country specific inference and track changes over time. Moreover, because perceptions are only imperfectly related to underlying physical and cost conditions, it would have been valuable in surveys to complement perceptual data with greater use of quantitative questions that evaluate constraints as much as possible, supporting cross-country comparisons and providing a check on perceptual responses.

The second problem is the sampling size is not consistent throughout the whole research as the number of firms providing their survey answers are various. That is to say, the firms answering the survey questions might be different. It is possible that some firms only answer some survey questions and did not provide their answers to the other questions. As a result, it is difficult for the scholar to apply the result of data analysis to every firms involved in the WBES. Thus it would be additionally hard to make a convince conclusion based on the research discussion. However, the inconsistent sample size does not mean the opinions of the firms taking part in the WBES are worthless. The researcher can still analyse the mainstream of responses according to certain survey questions and then to demonstrate the business environment in China.

The third problem is the WBES only contact managers or owners, excluding persons who are also connected with the business operation of FIEs from different aspects; there are possibilities that those persons could also provide some important information. The third problem is about the reliability of the WBES data collection. Many indicators in subjective areas might no longer be available either for memory lapse or as the particular information is only available at that time. Even if those data could be obtained, people might misclassify previous events and records, or recall details incorrectly. After all, some recent experiences and events may bias the recollection when people make about their earlier experiences, making inferences about trends or causation somewhat circular (Dex, 1991). Consequently, the information provided by even the proper person might bring extra bias and negatively influence the quality of research. In

addition, it is not easy for everyone to clarify those influences accurately, but the managers involved in survey must be capable of summarising the business operation. They should be able to understand the survey questions correctly, and express their ideas and minds clearly. In the procedure of the WBES data collection, translation is necessary, this involves translating questions into Chinese and translating their responses into English. In fact, it is difficult or might be impossible to choose the most accurate vocabularies in the translation, and the translation connected with data collection is dependent on the person who conducts the survey.

In addition, there are issues from the data analysis practice. When using SPSS to analyse data, there are several statistical tests available for author to make judgements. That is to say, it is the researcher who chooses a business model to carry out mathematical calculation, and then selects some appropriate statistical tests to make a conclusion. The process of statistical investigation and research conclusion are therefore totally subject to the person doing this research.

5.5 Summary of research design and methodology

This chapter explains why the author adopts positivism as the philosophical foundation of this study. This part also discusses the issues of methodology and research design, and illustrates the fact that a quantitative approach is the most appropriate method for this research. Some methods were planned from the beginning while other methods were emergent and were adopted once their usefulness became apparent. The author discusses the regression analysis as a research method in detail and discusses the type of data collected and the way it is analysed.

After comparing the ES and the WBES, the author explains why the ES is not appropriate for this research, and points out a number of advantages of using the WBES as a data source. In addition, a statistical analysis could provide factual accumulation of institutional changes, and this survey-based research should be able to explain how institutional factors influence the business performance of the firms with or without foreign ownership in China. The next three chapters will present the findings and further analysis of this empirical study, along with a discussion on the issues that are relevant to the research questions and research implications.

Chapter 6 Research finding: Initial descriptive analysis

6.1 Introduction

Data generated through SPSS software is used to examine the importance of institutions and to analyse the business constraints surveyed by the WBES. This chapter uses SPSS to examine the business constraints according to their rankings by undertaking descriptive data investigations in terms of frequencies and percentage. This approach presents an initial introduction to the main characteristics of the various types of firm, especially the one used for the sample, as well as the variables that define the various institutional constraints on business performance in China.

The first step is to present an overview of the business constraint rankings according to their severity in China. This gives a general idea about what constraints may affect the firms' business operations. By using descriptive analysis, one can demonstrate the perception of how different business constraints can cause problems. The second step involves looking at these constraints expressed in terms of percentages, which allows for making comparisons between the intensity of the factors in general and their intensity across the number of categories in detail. This chapter also gives a preliminary idea about how the factors are constrained across different categories, consisting of all firms, foreign firms and domestic firms, private firms and non-private firms, as well as the firms with small, medium and large sizes. The percentages and frequencies display how each firm category values the constraint compared to other categories.

6.2 Descriptive analysis

This section reviews the characteristics of the firms represented by the sample, focusing on size, sector and origins of ownership of the firms. Table 6.1 displays the frequencies of the variables characterising the nature of the firms. The frequencies of each category are displayed in terms of absolute numbers and percentages. (In this chapter, the differences in total number of different categories are due to missing values associated with the WBES data).

- Foreign ownership: A number of the firms have either foreign ownership or government ownership. In this thesis, the author **regards the firms with foreign ownership as a foreign firm and the firms without foreign ownership as a domestic firm**. The number of foreign firms is 35 (34.7% of the respondent sample). There are 66 domestic firms, which represent 65.3% of the respondent sample.

- Private firm: 24 companies are with government ownership, which represent 23.8% of the respondent sample; 77 companies are without government ownership, representing 76.2%. On the regulative side, "Chinese state is likely to act much less as a neutral referee, protecting property rights and individual freedoms and much more as an active player, promoting and controlling economic development" (Scott, 2002: 65). The firms are deeply influenced by the shares of government ownership because the government still has an overwhelming power to determine the firms' business operations, although the share of government ownership is far less than 50% (bottom limit of legal control). Thus, the author **only regards the firms without government ownership as a private firm and the firms with government ownership as a non-private firm**.
- Size and sector: The sample covers three different sizes of firms. They are 45 small, 30 medium and 26 large firms. They represent, respectively, 44.6%, 29.4% and 29.7% of the respondent firms. The sample also covers different sectors. The manufacturing sector holds the biggest share of the respondent sample. There are a total of 61 firms which represents 60.4% of the respondent sample. The second one covers the services sector, which includes 36 firms and 35.6% of the total. This sample also includes 3 firms that belong to the construction sector, and their share of the respondent sample is 3.0%. Only 1 firm is from the agricultural sector representing 1.0% of the respondent sample.
- Legal organisation: Among the respondent firms, 9 firms are organised as single proprietorship, 11 firms in partnership, 12 companies in cooperative arrangement, 20 privately-held corporations; these respectively represent 8.9%, 10.9%, 11.9%, 19.8% of the respondent sample. The largest category is the other legal organisation - 47 firms or 46.5% of the respondent sample. There are only 2 listed corporations, 2.0% of the total.

Table 6.1 Descriptive statistic of the firms' character

Foreign ownership	**Frequency (firm number)**	**Percent**
Yes	35	34.7
No	66	65.3
Total	101	100

Government ownership	**Frequency (firm number)**	**Percent**
Yes **(non-private firms)**	24	23.8
No **(private firms)**	77	76.2
Total	101	100

Size categories	**Frequency (firm number)**	**Percent**
Small	45	44.6
Medium	30	29.7
Large	26	25.7
Total	101	100

Sector	Frequency (firm number)	Percentage
Manufacturing	61	60.4
Service	36	35.6
Agriculture	1	1.0
Construction	3	3.0
Total	101	100

Legal organization of company	Frequency (firm number)	Percent
Single proprietorship	9	8.9
Partnership	11	10.9
Cooperative	12	11.9
Corporation, privately-held	20	19.8
Corporation listed on a stock exchange	2	2.0
Others	47	46.5
Total	101	100

6.3 Business constraints considered by the WBES

The WBES covers questions of which factors constitute business obstacles, reflecting two types of institutions that are formal (such as regulation) and informal institutions (such as corruption). These variables include financing; tax regulation; infrastructure; policy instability; inflation; functioning of judiciary; exchange rate; organised crime; street crime; and corruption. Table 6.2 shows the frequencies across the sample according to the constraint level. This table also displays the intensity of the constraints, ranging from no obstacle to major obstacle.

- Financing: This variable constitutes no obstacle for 12 firms, and 8 firms having minor obstacles in financing. 14 firms consider this as a moderate obstacle, and 67 firms regard financing as a major business obstacle, **representing 66.3% of the responding sample**.
- Infrastructure: 70 firms saw infrastructure as representing either no or minor obstacle to their business environment. This constitutes 69.3% of total responding firms. 31 firms, **representing 30.7%, see this factor as a moderate or major obstacle**.
- Political instability: There are 59 out of 100 responding firms which consider political instability to be either of no obstacle or as a minor obstacle. On the other side, 41 firms see this factor as either a moderate or major obstacle to their business activity.
- Inflation: This factor is a major obstacle for 14 firms, 14.1% of the respondent sample. 28 firms, 29 firms, and 28 firms respectively see it as no obstacle, minor obstacle, or moderate business obstacle, which are 28.3%, 29.3% and 28.3%.

- Exchange rate: 20 firms, which constitute 21.5% of responding firms, viewed this variable as a moderate or major obstacle. However, 72 firms see this variable as no obstacle or as a minor business constraint, 77.4% of the responding sample.
- Street crime: Only 7 firms consider this factor as their major obstacle in business, 7.1% of the respondent sample, whereas this factor is seen as a major obstacle for 11 firms. In the rest of the responding firms, 45 firms regard this as no obstacle and 36 firms think it as a minor business constraint. They represent 62.2% of the total responding sample.
- Organised crime: 52 and 26 firms respectively consider it as no obstacle or as a minor obstacle to their businesses. They represent respectively 53.6% and 26.8% of the total respondent sample. There are also 13 and 6 firms consider this factor as moderate and major business obstacle, 13.6% and 6.2% respectively.
- Tax regulation: 36 firms in the sample regard tax and regulation as no obstacle and as a minor obstacle respectively, 35.6% of the total respondent sample. However, 14 firms think this factor as moderate obstacle, and 15 companies regard this issue as a major obstacle in their business.
- Corruption: 42 firms consider corruption as no obstacle, 43.8% of the sample. In addition, 24 firms consider corruption as a minor business obstacle, representing 25.0% of the sample. **15 firms regard corruption as moderate obstacle, 15.6% of the respondent firms,** and so are the firms considering corruption as a major obstacle

Table 6.2 The main obstacles in the business environment of China

	Level of the constraints							
	No obstacle		**Minor obstacle**		**Moderate obstacle**		**Major obstacle**	
Categories	Firm number	Frequency	Firm number	Frequency	Firm number	Frequency	Firm number	Frequency
Financing	12	11.9%	8	7.9%	14	13.9%	67	66.3%
Infrastructure	42	41.6%	28	27.7%	24	23.8%	7	6.9%
Policy Instability /Uncertainty	32	32%	27	27%	23	23%	18	18%
Inflation	28	28.3%	29	29.3%	28	28.3%	14	14.1%
Exchange rate	47	50.5%	25	26.9%	12	12.9%	8	8.6%
Street crime	45	45.5%	36	36.4%	11	11.1%	7	7.1%
Organized Crime	52	53.6%	26	26.8%	13	13.4%	6	6.2%
Taxes and regulation	36	35.6%	36	35.6%	14	13.9%	15	14.9%
Corruption	42	43.8%	24	25.0%	15	15.6%	15	15.6%

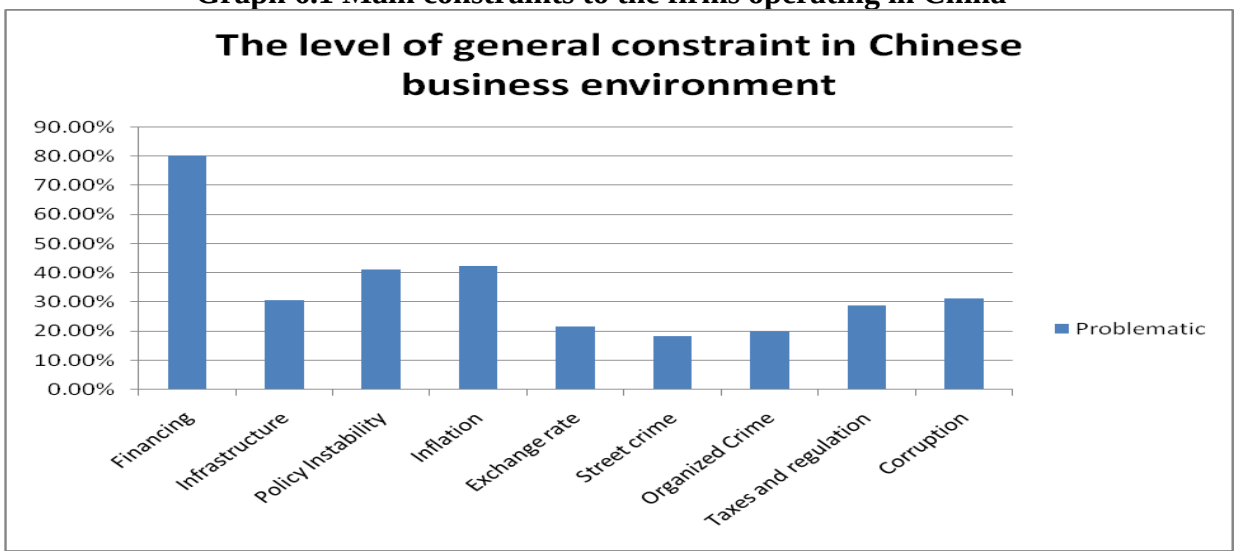
Table 6.3 Ranking of the General Constraints

Categories	Moderate obstacle	Major obstacle	Problematic	ranking
FIN	13.9%	66.3%	80.2%	1
INFR	23.8%	6.9%	30.7%	5
PI	23%	18%	41%	3
INFL	28.3%	14.1%	42.4%	2
ER	12.9%	8.6%	21.5%	7
SC	11.1%	7.1%	18.2%	9
OC	13.4%	6.2%	19.6%	8
TAR	13.9%	14.9%	28.8%	6
COR	15.6%	15.6%	31.2%	4

NB: A. Financing (FIN); Infrastructure (INFR); Political Instability (PI); Inflation (INFL); Exchange Rate (ER); Street Crime (SC); Organised Crime (OC); Tax and Regulation (TAR); Corruption (COR).

B. Ranking is based on the descending order of problematic percentage.

Graph 6.1 Main constraints to the firms operating in China



It is useful to classify how these general constraints are problematic according to their intensity across the whole survey sample in China. In Table 6.3, the problematic percentages only include the responses of moderate and major obstacle. Graph 6.1 gives an indication around the intensity of the general business obstacles according to the responses. These figures show that, according to more than 80% of respondents in the sample, **financing is a major business obstacle in China**. Inflation and political instability are amongst the secondary business constraints, 42.4% and 41% respectively. **Corruption, infrastructure, tax and regulation are at the third level**, 31.2%, 30.7% and 28.8% correspondingly. Exchange rate, organised crime and street crime have scored the lowest percentage with 21.5%, 19.6% and 18.2% respectively.

The responses clearly show that institutional factors are crucial for business operations. The non-economic factors such as political instability and corruption are as much constraining to business performance as economic factors. This reinforces the argument that institutions have an important effect on business performance. The next section will use the cross-tabulation method to underline how each variable is valued under each firm category.

6.4 How constraining these variables for each category

6.4.1 Major obstacles

Table 6.4 shows how problematic the major obstacles are for each firm category, i.e. the foreign firms (Yes under Foreign firms) and domestic firms (No under Foreign firms), the private firms (Yes under Private firms) and non private firms (No under Private firms), and the small, medium, and large sized firms. The percentages reflect answers of moderate or major obstacle.

- Foreign and domestic firms: Both the foreign and domestic firms regard "**financing**" and "**inflation**" as their top two business obstacles. All firms consider "**political instability**" as one of the main business obstacles. Nevertheless, these factors, although their intensity is more or less similar, differs from domestic firms to foreign firms. Whilst the foreign firms' rate "exchange rate" as the fourth largest concern, domestic companies regard this as the most unimportant business factor. Foreign firms are more limited by "tax and regulation" rather than by "corruption". On the other hand, domestic firms think "corruption" is more serious than "tax and regulation".
- Private firms and non-private firms: The private firms and non-private firms both chose "financing" and "inflation" as the most important business restrictions. Moreover, both sides mark "political instability" as one of the main constraints. 25% of non-private firms identify "exchange rate" as another main constraint. At the same time, the private firms regard this factor as the most unimportant constraint. On the other hand, the non-private firms view "infrastructure" as a less limiting factor, whereas for the private firms, "infrastructure" is less vital than "financing", "inflation" and "political instability", but more important than any other obstacles.
- Small, medium and large firms: The classification and the intensity of the constraints differ according to the firm size. They show different concerns as to how problematic the constraints are. The medium size firms report more concerns on "corruption", "taxes and regulation". The small firms mark "political instability" as the second most problematic constraint. Large firms showed less sensitivity to the majority of constraints as the degree of the intensity is less pronounced compared to small and medium sized firms.

"Political instability" and "financing" are still main concerns for large firms, and "infrastructure" appears much less restrictive to them than small or medium sized firms. Moreover, both large and small firms do not view "corruption" as a major concern.

The descriptive analysis of general constraints cannot clarify the disparities in the ranking of the constraints between the firm categories. In the next chapter, the Levene's test and the Error Bar technique are used to determine whether the perception about the constraints across these different categories changes, and the results will thus be stronger, despite the fact that the number of observations in the categories vary greatly. The next section illustrates the sub-variables that form the above constraints, focusing on the types of financing problems and types of corruption in addition to the types of obstacles related to the judicial system, competition and regulation.

Table 6.4 The problematic obstacles for each category of firms

Categories		**FIN**	**INFR**	**PI**	**INFL**	**ER**	**SC**	**OC**	**TAR**	**COR**
All firms		80.2%	30.7%	41%	42.4%	21.5%	18.2%	19.6%	28.8%	31.2%
	Ranking	1	5	3	2	7	9	8	6	4
Foreign ownership	Yes	68.6%	25.7%	31.4%	34.3%	25.7%	8.6%	11.4%	25.7%	20%
	Ranking	1	4	3	2	4	9	8	4	7
	No	83.4%	33.3%	45.5%	45.5%	16.7%	22.7%	22.7%	30.3%	34.8%
	Ranking	1	5	2	2	9	7	7	6	4
Private firms	No	91.7%	16.7%	37.5%	41.7%	25%	12.5%	12.5%	33.3%	25%
	Ranking	1	7	3	2	5	8	8	4	5
	Yes	76.6%	35.1%	41.6%	41.6%	18.2%	19.5%	20.8%	27.3%	31.2%
	Ranking	1	4	2	2	9	8	7	6	5
Size	Small	82.2%	37.8%	48.9%	44.4%	20%	20%	22.2%	24.4%	28.9%
	Ranking	1	4	2	3	8	8	7	6	5
	Medium	80%	23.3%	23.3%	30%	13.3%	10%	10%	30%	30%
	Ranking	1	5	5	2	7	8	8	2	2
	Large	76.9%	26.9%	46.2%	50%	26.9%	23.1%	23.1%	34.6%	30.8%
	Ranking	1	6	3	2	6	8	8	4	5

NB: A. Financing (FIN); Infrastructure (INFR); Political Instability (PI); Inflation (INFL); Exchange Rate (ER); Street Crime (SC); Organised Crime (OC); Tax and Regulation (TAR); Corruption (COR).

B. Ranking is based on the descending order of problematic percentage.

6.4.2 Competition constraints

The competition constraints consist of avoiding taxes; paying no duties by other competitors; producers selling below international prices; domestic producers selling unfairly below normal prices; violation of patents; collude for credit; and foreign subsidies received. The judgement was based on four-point scale and only moderate and major scales are again taken into

consideration. Table 6.5 shows the percentages related to the number of firms and weight of opinion attached to each variable.

Table 6.5 The competition constraints across different categories

Categories		**AT**	**ND**	**FP**	**DP**	**VP**	**CC**	**RS**
All firms		42.6%	34.1%	35.6%	64.6%	50.5%	44.1%	33.0%
	Ranking	4	6	5	1	2	3	7
Foreign ownership	Yes	54.8%	38.2%	40.6%	66.7%	42.4%	45.5%	20.6%
	Ranking	2	6	5	1	4	3	7
	No	53.1%	31.6%	32.7%	63.5%	54.8%	43.3%	38.1%
	Ranking	3	7	6	1	2	4	5
Private firms	No	72.2%	40%	47.4%	68.2%	69.6%	50.0%	26.1%
	Ranking	1	6	5	3	2	4	7
	Yes	48.4%	32.4%	32.4%	63.5%	44.4%	42.5%	35.1%
	Ranking	2	6	6	1	3	4	5
Size	Small	44.4%	23.1%	24.3%	71.4%	39.0%	39.0%	28.6%
	Ranking	2	7	6	1	3	3	5
	Medium	53.4%	40.7%	37.0%	51.7%	71.4%	30.8%	41.4%
	Ranking	2	5	6	3	1	7	4
	Large	66.7%	44.0%	52.2%	68.0%	46.2%	65.4%	30.8%
	Ranking	2	6	4	1	5	3	7

NB: A. Avoid taxes (AT); No duties (ND); Foreign prices (FP); Domestic prices (DP); Violation of patent (VP); Collude for credit (CC); Receive subsidies (RS).

B. Ranking is based on the descending order of problematic percentage.

The biggest constraint of all firms is “domestic producers sell unfairly below normal prices”, and more than 50% of the firms consider violation of patent as the second major business obstacle. The bottom three constraints are nearly at the same level, which are subsidies received, paying no duties by other competitors, and producers sell below international prices.

- Foreign and domestic firms: There is not a large difference regarding the obstacles to competition between the foreign firms and domestic firms. Instead, the foreign firms pay more attention to “avoiding taxes”, while the domestic firms focus more on “violation of patent” as an obstacle. The foreign firms regard the factor of “foreign subsidies received” as the most unimportant constraint in competition.
- Private firms and non-private firms: The non-private firms regard “avoiding taxes” as their top concern in competition obstacles. This opinion of private firms is different from the concerns of non-private firms. Additionally, more than two thirds of non-private firms focus their concerns on the three obstacles, which are “avoiding taxes”, “violation of patent”, and “domestic producers sell unfairly below normal prices”.

- Small, medium and large firms: The medium size firms are most constrained by "violation of patent", while the responses of small and large size firms are similar. "Paying no duties by other competitors" is the most unimportant constraint for small sized firms, while the medium sized firms choose "collude for credit" and the large sized firms select "foreign subsidies received" as the least constraining factors respectively.

6.4.3 Finance factors

There are ten kinds of financial constraints in the WBES, including special connections; paper work; collateral; high interest rate; lack of money to lend; corruption of bank officials; access to foreign banks; access to non-bank equity; export finance; lease finance; and credit. Table 6.5 shows the percentages reflecting how each financial constraint is problematic. These constraints are categorised into four groups (no, minor, moderate and major obstacle), where only moderate and major obstacle options are considered as problematic constraints. This demonstrates intensity to how these problems are viewed. Inadequate credit information regarding customers is the top financial constraint. Lack of money to lend and high interest rates are the other two major financial constraints. Bank paper work and special connections are in the fourth and fifth position respectively, followed by lease finance, export finance, and collateral. The factors named as the least important constraints were access to foreign banks and access to non-bank equity.

Table 6.6 The problematic finance constraints for each firm category

Categories		COL	PW	HIR	SC	LML	AFB	ANBE	EF	LF	CI
All firms		20.2%	29%	35.4%	25.5%	37%	17.1%	12.8%	21.3%	22.5%	45.5%
	Ranking	8	4	3	5	2	9	10	7	6	1
Foreign ownership	Yes	17.1%	25.7%	22.9%	27.3%	37.1%	29.6%	15.6%	22.2%	20.7%	41.2%
	Ranking	9	5	6	4	2	3	10	7	8	1
	No	21.9%	30.8%	42.2%	24.6%	36.9%	9.3%	11.1%	20.8%	23.3%	46.2%
	Ranking	7	4	2	5	3	10	9	8	6	1
Private firms	No	25%	50%	50%	20.8%	29.2%	20%	14.3%	16.7%	22.7%	37.5%
	Ranking	5	1	1	7	4	8	10	9	6	3
	Yes	18.7%	23.7%	30.7%	27.1%	39.5%	9.6%	8.5%	13.8%	23.4%	46.7%
	Ranking	7	5	3	4	2	9	10	8	6	1
Size	Small	7.5%	14.9%	14.9%	11.7%	19.2%	2.2%	5.3%	7.5%	6.4%	53.3%
	Ranking	6	3	3	5	2	10	9	6	8	1
	Medium	20.7%	26.7%	27.6%	25%	33.3%	16.7%	0	6%	19.2%	37.9%
	Ranking	6	4	3	5	2	8	10	9	7	1
	Large	26.9%	26.9%	50%	25%	34.6%	33.3%	26.1%	27.3%	37.5%	38.5%
	Ranking	7	7	1	10	4	5	9	6	3	2

NB: A. Collateral (COL); Paper work (PW); High interest rate (HIR); Special connections (SC); Lack of money to lend (LML); Access to foreign bank (AFB); Access to non-bank equity (ANBE); Export finance (EF); Lease finance (LF); Credit Information (CI).

B. Ranking is based on the descending order of problematic percentage.

In fact, there are two sorts of financial constraints - economic factors and non-economic factors. These results show that institutional factors are regarded with medium importance amongst financial constraints, including special connections and bank paper work. In China, these institutional constraints are less important than some economic factors, such as inadequate credit information, lack of money to lend and high interest rates. Table 6.6 demonstrates that the disparity between the two types is not obviously distinguishable.

- Foreign and domestic firms: Credit information is the main concern for foreign and domestic firms. It also shows the differences in the weight attached to each financial constraint in both categories. Similarly, both consider the non-economic/institutional factors "paper work" and "special connections" as two of the main constraints. However, it is shown that for domestic firms, economic constraints such as "interest rate" are more limiting than non-economic/institutional constraints, in comparison to foreign firms which are more likely to worry about lack of money to lend. The factors of lack of money to lend and lease finance are the two foremost concerns for foreign firms, and access to foreign bank and special connections are the third and fourth constraints. On the other hand, domestic firms regard "access to foreign bank" as the most unimportant factor. Additionally, some institutional constraints are relatively important for both, i.e. credit information about customers, special connections and paper work. 46.2%, 24.6% and 30.8% of foreign firms view inadequate credit information on customers; special connection; and paper work as problematic compared with, respectively, to 41.2%, 27.3% and 25.7% of domestic firms.
- Private firms and non-private firms: Non-private firms regard both paper work and high interest rate as the most important types of financial constraints. Credit information, lack of money to lend and collateral are the following factors in their list. Credit information is the top concern for private firms, whilst lack of money to lend, high interest rate, and paper work comes immediately after as other important factors for their operation. Both categories of firms see "Access to foreign bank" as the most unimportant financial constraint. Likewise, both regard "Access to non-bank equity" and "export finance" as other unimportant financial concerns. Table 6.5 also shows that, when the non-private firms choose paper work as the top one constraint, the private firms value the same factor as of medium importance. In other words, the non-private firms have to face the limitations of bureaucracy, while the private firms do not have these same concerns. For the same reason, the constraint of special connection is more important for the private firms than the non-private firms. This is because non-private firms have the advantage of

internally using the administrative system which is controlled by the government to deal with finance constraints.

- Small, medium and large firms: The firms' state that "access to non-bank equity" and "export finance" are the two most unimportant concerns. They attach almost equal importance to the rest of the financial constraints they face. It is noted that small firms appear to concentrate on the one constraint, while their valuation on all other factors is averagely low. "Credit information" is the most important constraint for small firms, while "access to foreign bank" is the most unimportant. Again, the economic factors (i.e. high interest rate, lack of money to lend) are as important as the institutional constraints (i.e. paper work, special connections). The large firms also focus on one constraint, and report much higher averages compared with small and medium firms. Large firms attach greater importance to economic factors as obstacles rather than institutional issues. For example, high interest rate is the most important factor which impacts on the business activity of firms in this category. Special connections come in the bottom position, but the percentage number of large firms that consider it as problematic is still 25%, much higher than the bottom level of small and medium firms. Finally, credit information, lack of money to lend and high interest rate are the top constraints for the medium size firms.

6.4.4 Rules and regulations

This category covers seven factors: named business licensing; customs and foreign trade regulation; labour regulations; foreign exchange regulations; environmental regulation; tax administration; and high taxes. They are judged on the four-point scale: No obstacle, minor, moderate and major obstacle. Table 6.7 shows that the constraint of high taxes is the most pressing business obstacle for 50% of the firms. This is followed by tax administration regulations and business regulations. Foreign exchange regulations and labour regulations score the lowest percentages in this category. Table 6.8 also shows how constraining these factors are for the different firms by reflecting the distribution of the opinions across these categories. This table confirms that the regulation constraint of high taxes is the top obstacle to all firms.

- Foreign and domestic firms: The foreign firms demonstrate higher levels of concerns to regulatory constraints than the domestic firms, except "business regulations" and "customs regulations". Foreign firms consider "high tax" and "tax administration regulations" as their top two constraints. Domestic firms show more concerns about "high taxes" and "business regulations".

- Private firms and non-private firms: High tax is the top concern for both private and non-private firms. Secondly, the non-private firms choose "business regulation" while the private firms select "tax administration regulation" as their next concern. Non-private firms think "customs regulations" is the least important factor; whilst for the private firms, "foreign exchange regulations" is the least limiting factor.
- Small, medium and large firms: "High taxes" is the most major concern to all firms regardless of their size. However, small firms are less constrained by "tax administration" than the categories of large and medium firms. On the other hand, the medium firms are less constrained by "business regulations" than the small firms and large firms. These results indicate that small firms are not constrained by high tax rates. In comparison to small and larger firms, these results reflect the difficulties faced by medium firms in dealing with administrative issues.

Table 6.7 The constraints of rules and regulation across the different categories

Categories		**BR**	**CR**	**LR**	**FER**	**ER**	**HT**	**TAR**
All firms		27.7%	21.0%	16%	14.6%	19.8%	50%	30%
	Ranking	3	4	6	7	5	1	2
Foreign ownership	Yes	22.9%	18.5%	22.9%	20.0%	20.0%	65.6%	37.1%
	Ranking	3	7	3	5	5	1	2
	No	30.3%	22.4%	12.3%	11.5%	19.7%	41.9%	26.2%
	Ranking	2	4	6	7	5	1	3
Private firms	No	29.2%	15.8%	16.7%	20.0%	21.7%	41.7%	20.8%
	Ranking	2	7	6	5	3	1	4
	Yes	27.3%	22.8%	15.8%	12.9%	19.2%	52.9%	32.9%
	Ranking	3	4	6	7	5	1	2
Size	Small	31.1%	24.3%	13.6%	15.4%	17.1%	41.9%	27.3%
	Ranking	2	4	7	6	5	1	3
	Medium	20.0%	21.1%	20.0%	13.6%	20.7%	50.0%	33.3%
	Ranking	5	4	5	7	3	1	2
	Large	30.8%	15.0%	15.4%	14.3%	23.1%	64.0%	30.8%
	Ranking	2	6	5	7	4	1	2

NB: A. Business regulations (BR); Customs regulations (CR); Labour regulations (LR); Foreign exchange regulations (FER); Environmental regulations (ER); High taxes (HT); Tax administration regulations (TAR).

B. Ranking is based on the descending order of problematic percentage.

In summary, "business regulation" is less problematic than other regulations such as tax administration, the rate of taxes or customs regulation. This indicates that the regulation of business transactions is much less problematic because of undertaking reforms in China. However, informal constraints such as illegal payments and special connections are no less constraining than the business regulation constraint. This shows that reforms of informal

institutions still lag behind the reforms of formal rules. This may result in the ineffectiveness of the reforms in rules and regulations, especially noting that all firms still consider regulatory framework such high taxes and tax administration regulations as major impediments.

6.4.5 Corruption factors

There are many areas of concern regarding corruption in the WBES. This includes areas such as corruption as a general constraint; corruption of bank officials; corruption for firms to pay additional payments; corruption payments to telephone authorities, corruption payments to licensing authorities; corruption payment to tax authorities; corruption payments to gain government contracts; and corruption payments to customs. However, based on the WBES in China, the firms only mention two types of corruption - corruption as a general constraint and the corruption of bank officials. The answers to all other corruption questions are not available.

Table 6.8 How problematic the corruption constraints across different firm categories in China

Categories		Corruption as a general constraint (percentage)	Corruption of bank officials (percentage)
All firms		31.2%	32.3%
Foreign ownership	Yes	20%	22.8%
	No	34.8%	33.4%
Private Firms	No	25%	25%
	Yes	31.2%	31.2%
Size	Small	28.9%	33.4%
	Medium	30%	20%
	Large	30.8%	34.6%

Table 6.8 ranks corruption factors from no obstacle to minor, moderate, and major obstacle. The next section follows similar methodology used in the previous section in order to look at the concerns of these different forms of corruption across the firm categories. Table 6.8 also shows that different types of corruption recorded different rates of frequencies. The medium sized firms and domestic firms regard the level of corruption of bank officials as below the general corruption level. In regards to corruption as a general constraint, the responses of private firms and non-private firms were the same. In other firm categories, the percentage of the concerns on corruptions of bank officials is higher than that of corruption as a general constraint. Hence, the corruption of bank officials is one of the business obstacles in China.

- Foreign and domestic firms: The foreign firms think "corruptions of bank officials" is worse than corruption in general, while domestic firms consider "corruptions of bank officials" as less problematic to their business compared to corruption as a general constraint. Although the literatures of Chapter 3 and Chapter 4 list a number of advantages designed officially for foreign firms, in terms of financing, they in fact are limited by the corruption of bank officials.
- Private firms and non-private firms: There is no connection between private ownership and the concerns of either corruption of bank officials or corruption as a general constraint. They are constrained by the factors of corruption equally.
- Small, medium and large firms: Corruption of bank officials is a bigger worry than corruption in general for both small and large sized firms. However, the medium size firms think "corruption of bank officials" is less problematic than corruption as a general constraint. The feedback of domestic firms has demonstrated that there are some difficulties when putting official supports into practice, particularly for both small and large firms. As the domestic firms' business operation and growth have to depend on the financial support of banks, the literatures in Chapter 3 and Chapter 4 display that the official arrangements favour the business of foreign firms in China and it is difficult for domestic firms to obtain those same supports from banks.

6.4.6 Judicial functioning

Table 6.9 reflects the opinions regarding the quality of courts and how frequently they are seen as fair and impartial, honest, quick, consistent, enforceable, and affordable. The quality was assessed on the following scale: Always, usually, frequently, sometimes, seldom, never. Only the three categories of scale: always, usually, and frequently were taken into consideration to clarify their importance. It is quite apparent that there is wide range of firms that report positive opinions about the functioning of the courts, and only one judicial constraint whose quality level falls below 50% for all firms, which is "courts-quick". Similar to the concerns of financial constraints, bureaucracy is an unavoidable barrier in the judicial system. One explanation is that the judicial system in China is still not totally independent from its government or the financial system. To find out whether the intensity of the opinions differs among the different categories, it is necessary to see how opinions are distributed across the categories of firms.

- Foreign and domestic firms: The foreign firms are quite satisfied, as the lowest level is recorded at 50%. The feedback of foreign firms is consistent, and its satisfactory level lies between 63.3% and 50.0%. In regards to domestic firms, although 47.5% are not

satisfied with the efficiency of courts, their satisfaction levels between 68.3% and 59.3% with the rest of the judicial constraints are higher than that of foreign firms. The foreign firms are less satisfied with the quality of the courts than the domestic firms.

- Private firms and non-private firms: The non-private firms value all judicial factors at a high level of satisfaction, from 90.5% to 68.2%. Nevertheless, the private firms are dissatisfied with two issues about the courts, which are "quick" at 43.5% and "honest" at 48.6%. For the private firms, their most satisfied aspect is enforceability at 64.6%. However, the lowest satisfied percentage of the non-private firms at 68.2% was regarding enforceability, but which was still higher than the level of satisfaction of the private firms.
- Small, medium and large firms: The different sized firms reported high instances of positive opinions about the quality of the courts. However, small sized forms reported the lowest level of satisfaction at 39%. This was in regards to "courts-fair and impartial", "courts-honest", "courts-quick", and "courts-affordable," which could be explained as their satisfaction levels is positively related to their firm size.

From the data, it appears that the firms' report positive opinions about the functioning of courts. Does the intensity of the opinions differ among the categories? To answer this question, the author will review how the opinions are distributed across the categories of firms in the next chapter.

Table 6.9 The quality level of the judicial constraints across the firms' categories

Categories		**CFI**	**CH**	**CQ**	**CA**	**CC**	**CE**
All firms		65.6%	56.0%	41.8%	65.9%	61.4%	65.5%
	Ranking	2	5	6	1	4	3
Foreign ownership	Yes	60.6%	50.0%	59.4%	63.3%	54.8%	61.3%
	Ranking	3	6	4	1	5	2
	No	68.3%	59.3%	47.5%	67.3%	64.9%	67.9%
	Ranking	1	5	6	3	4	2
Private firms	No	85.7%	81.0%	77.3%	72.7%	90.5%	68.2%
	Ranking	2	3	4	5	1	6
	Yes	59.7%	48.6%	43.5%	63.5%	58.2%	64.6%
	Ranking	3	5	6	2	4	1
Size	Small	61.0%	53.7%	39.0%	62.2%	63.2%	70.3%
	Ranking	4	5	6	3	2	1
	Medium	59.3%	50.0%	76.9%	60.0%	50.0%	55.6%
	Ranking	3	5	1	2	5	4
	Large	80.0%	66.7%	87.5%	78.3%	70.8%	69.6%
	Ranking	2	6	1	3	4	5

NB: A. Courts-fair and impartial (CFI); Courts-honest (CH); Courts-quick (CQ);Courts-affordable (CA); Courts-consistent (CC); Courts-enforceability (CE).

B. Ranking is based on the descending order of problematic percentage.

6.5 Summary

This chapter provides a descriptive analysis on the importance of institutional and non-institutional constraints for business performance in China. It also demonstrates the importance of these constraints across the three firm categories, which comprises of foreign firms and domestic firms, private firms and non private firms, and firms with different sizes.

The results show that firms are concerned with institutional constraints and that these constraints are paramount factors for business operation in China. This involves informal and formal institutional constraints such as corruption, tax and regulation, and financing. In addition, firms in China attach significance to informal institutions, such as "court-honest" as a constraining factor. Factors such as tax regulation and corruption are more commonly reported by different firms than some of the non institutional factors such exchange rate and inflation. Furthermore, this chapter highlights the important point that informal institutions, such as corruption, are just as important for business operations of different firms in China as formal institutions, such as rule & regulation and legal systems.

Finally, this chapter highlights the discrepancies between the different categories of firms. This concludes that the different categories of firms could differ in their abilities to face constraints, in the context of formal institutions and informal institutions. Hence, an in-depth examination of differences will be reviewed in the next chapter which makes use of more advanced statistical techniques, such as the Levene's test and Error bar, to investigate the proportional differences in the opinions amongst the different categories (Zimmerman, 2004).

Chapter 7 Research finding: Empirical investigation

7.1 Introduction

This chapter investigates the insider-outsider propositions of the conceptual framework, which have been discussed in Chapter 3 (table 7.0). These hypotheses are related to the different firm categories in the WBES which includes foreign firms, domestic firms, private firms and non-private firms. These hypotheses are H1, H2, H3, H4 and H5. In addition, the categories overlap each other and consequently the results associated with each classification could be affected by the characteristics of the remaining categories in testing differences between different categories (Hellman et al., 2000; Batra et al., 2003). Its scrutiny is necessary to understand the mode of entry of the foreign firms to the host country and the business environment, especially for private firms in China. The investigation about the H6 related to the firm size is summarised and discussed at the end of the chapter.

Table 7.0 Research Hypothesis

Hypothesis 1 (H1a)	The foreign firms are less constrained by the constraints of business competition than the domestic firms.
Hypothesis 1 (H1b)	The private firms are more constrained by the constraints of business competition than the non private firms.
Hypothesis 2 (H2a)	The foreign firms are less constrained by the constraints of finance than the domestic firms.
Hypothesis 2 (H2b)	The private firms are more constrained by the constraints of finance than the non private firms.
Hypothesis 3 (H3a)	The foreign firms are less constrained by the constraints of business rules and regulations than the domestic firms.
Hypothesis 3 (H3b)	The private firms are more constrained by the constraints of business rules and regulations than the non private firms.
Hypothesis 4 (H4a)	The foreign firms are more constrained by the constraints of corruption than the domestic firms.
Hypothesis 4 (H4b)	The private firms are more constrained by the constraints of corruption than the non private firms.
Hypothesis 5 (H5a)	The foreign firms are less constrained by legal constraints than the domestic firms.
Hypothesis 5 (H5b)	The private firms are more constrained by legal constraints than the non private firms.
Hypothesis 6 (H6a)	The business constraints faced by the firms are positively related to the factor of firm size. That is, large firms face fewer problems in terms of formal institutional constraints than medium firms that in turn have fewer problems than small firms have.
Hypothesis 6 (H6b)	The business constraints faced by the firms are negatively related to the factor of firm size. That is, large firms face fewer problems in terms of informal institutional constraints than medium firms that in turn have fewer problems than small firms have.

7.2 Methodology and variances homogeneity testing

This chapter compares variances by using statistical techniques provided by SPSS, consisting of Levene's test and Error bar. The author chooses Levene's test to investigate the differences in the proportional perceptions between the different firm categories, over other parametric and non parametric techniques such as Mann-Whitney U test (non-parameteric) and ANOVA test (parametric) because the Levene's test is more flexible and safer when comparing groups which have large disparities in the size of the number of observations. This is appropriate due to the size of the categories investigated in this research. It is also useful when comparing between categories with a small number of observations. In addition, this test does not depend on the assumption of normal data distribution (Milliken and Johnson, 1984; Zimmerman, 2004; Hsieh and Miller, 1990). Levene's test for homogeneity is used because this research is more concerned with testing the differences in the proportion of perception among the different categories with regard to the constraints, rather than testing whether or not a specific constraint is problematic for different firm groups. Together with Levene's test, the Error Bar is also used to exhibit which of the compared categories value the constraint most, to give a good indication about the variability in the opinions within the category itself (Brace et al., 2009).

This section explores the impact of differences in the severity of the business constraints. It highlights the differences in the opinions of different firm categories with regard to the constraints. A number of conclusions and inferences that explain these differences are reported respectively. The scrutiny of the differences falls within the scope of studying the influences of institutions on the business operation. At the end of this chapter, there is a conclusion about the differences across the firm categories.

7.3 The category of foreign and domestic firms

This section investigates differences between the perceptions of foreign and domestic firms about the same constraining factors, including competition constraints, finance constraints, judicial constraints, corruption constraints, rules and regulations constraints. To study the differences in perception, this paper classifies the foreign firms as outsiders and domestic firms as insiders. The Levene's test compares the homogeneity of the variances between foreign firms and domestic firms, the two types of firms seem to differentiate in their perceptions with regards to the same constraint (table 7.1, table 7.2, table 7.3, table 7.4, table 7.5, and table 7.6). Because of the difference of with/without foreign ownership, "**financing**" is the only one significant

general constraint (table 7.1). "**Court-enforceability**" and "**finance-access to foreign bank**" are the two significant factors among the specific constraints (table 7.3 and table 7.4). The other constraints are all not significantly related to the difference of foreign ownership factor.

Table 7.1 Levene's test of the general constraints

Test of Homogeneity of Variances

General constraint	Levene Statistic	df1	df2	Sig.
Financing	***4.022***	***1***	***99***	***.048***
Infrastructure	.018	1	99	.893
Political instability	1.631	1	98	.205
Inflation	.011	1	97	.916
Exchange rate	.339	1	90	.562
Street crime	1.896	1	97	.172
Organised crime	3.060	1	95	.083
Taxes and regulations	.092	1	99	.762
Corruption as a general constraint	.808	1	94	.371
Functioning of the judiciary	.497	1	92	.483
Anticompetitive practices	1.307	1	96	.256

Table 7.2 Levene's test of the competition constraints

Test of Homogeneity of Variances

Competition constraint	Levene Statistic	df1	df2	Sig.
Avoid taxes	.123	1	78	.727
No duties	2.412	1	89	.124
Foreign price	3.666	1	85	.059
Domestic price	.728	1	94	.396
Violation of patents	.211	1	93	.647
Collude for credit	.016	1	91	.900
Receive subsidies	.076	1	95	.784

Table 7.3 Levene's test of the judicial constraints

Test of Homogeneity of Variances

Judicial constraints	Levene Statistic	df1	df2	Sig.
Fair & impartial	.212	1	91	.646
Honest	.029	1	89	.866
Quick	.158	1	89	.692
Affordable	1.399	1	83	.240
Consistent	2.397	1	86	.125
Enforceability	***4.819***	***1***	***85***	***.031***

Table 7.4 Levene's test of the finance constraints

Test of Homogeneity of Variances

Finance constraints	Levene Statistic	df1	df2	Sig.
Collateral	.035	1	97	.851
Paperwork	.225	1	98	.636
High interest rates	2.645	1	97	.107
Special connections	.043	1	92	.836
Lack money to lend	.969	1	98	.327
Access to foreign banks	***10.608***	***1***	***68***	***.002***
Access to non bank equity	.153	1	84	.697
Export finance	.155	1	73	.695
Lease finance	.013	1	87	.911
Credit	1.032	1	97	.312
Long term loan	.154	1	94	.695

Table 7.5 Levene's test of the rules and regulation constraints

Test of Homogeneity of Variances

Rules and regulation constraints	Levene Statistic	df1	df2	Sig.
Business regulations	.244	1	99	.622
Customs regulations	1.993	1	74	.162
Labour regulations	3.753	1	98	.056
Foreign exchange regulations	3.286	1	80	.074
Environmental regulations	.089	1	94	.766
Fire regulations	.728	1	95	.396
High taxes	.015	1	92	.902
Tax administration regulations	.802	1	98	.373

Table 7.6 Levene's test of the corruption constraints

Test of Homogeneity of Variances

Corruption constraints	Levene Statistic	df1	df2	Sig.
Corruption as a general constraint	.808	1	94	.371
Corruption of bank officials	3.025	1	91	.085

7.3.1 Competition constraints

7.3.1.1 Collusion for credit

According to "collusion for credit", foreign and domestic firms report similar level of perception. The Levene's test (Table 7.1) is significant at 90%, that the two groups do not have

significantly different variances, i.e. different perception regarding to this constraint. As we assume variances are equal, we use the middle row of the output. The p value is 0.811 which is not less than or equal to 0.05, which confirms that we fail to observe a difference in the competition constraint of collusion for credit between foreign firms and domestic firms. This means that domestic firms do not have a large difference in opinion about how they are constrained by "collusion for credit" compared to foreign firms.

Table 7.7 Levene's test of the competition constraint---Collude for credit

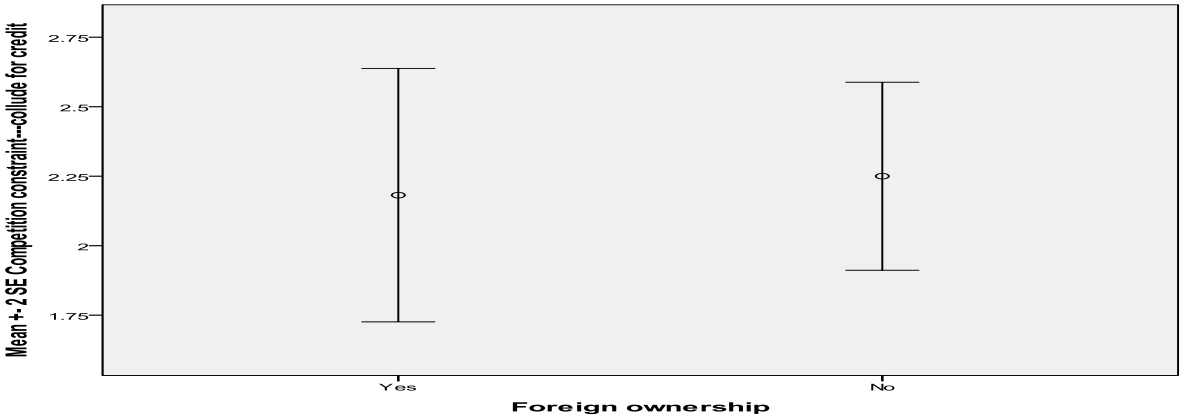
	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Collusion for credit	Yes	33	2.18	1.310	.228
	No	60	2.25	1.310	.169

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Collusion for credit	Equal variances assumed	.016	.900	-.240	91	.811	-.068	.284	-.632	.496
	Equal variances not assumed			-.240	66.047	.811	-.068	.284	-.635	.499

The Error bar (graph 7.1) shows, that the domestic firms are slightly more constrained by the collusion of the competitors for credit than the foreign firms. This insignificant difference can be expected if the foreign owners possibly have a better access to the credit market than domestic firms, especially under the financing control of the Chinese government (chapter 3: section 3.3.2.1). However, this variation in the perception is bigger in the category of foreign firms (table 7.7). This table shows that the standard error of foreign firms is bigger (0.228) than that of domestic firms (0.169). Thus, not all foreign firms have the same perception. This could imply that other firm characters, such as firm size, might play a role in explaining the heterogeneity of this category. Moreover, in Chapter 6, table 6.5 displays that foreign firms

consider the factor of collude for credit is less problematic, compared to domestic firms. Graph 7.1 further confirms that the group of foreign firms is less constrained by this factor than the group of domestic firms. This could be due to the ability of foreign firms to access the credit market without less official difficulties (chapter 3: section 3.3.2.1).

Graph 7.1 The error bar showing the standard error and mean differences---Collude for credit



7.3.1.2 Reception of subsidies from competitors

Table 7.8 Levene's test of the competition constraint---Reception of subsidies

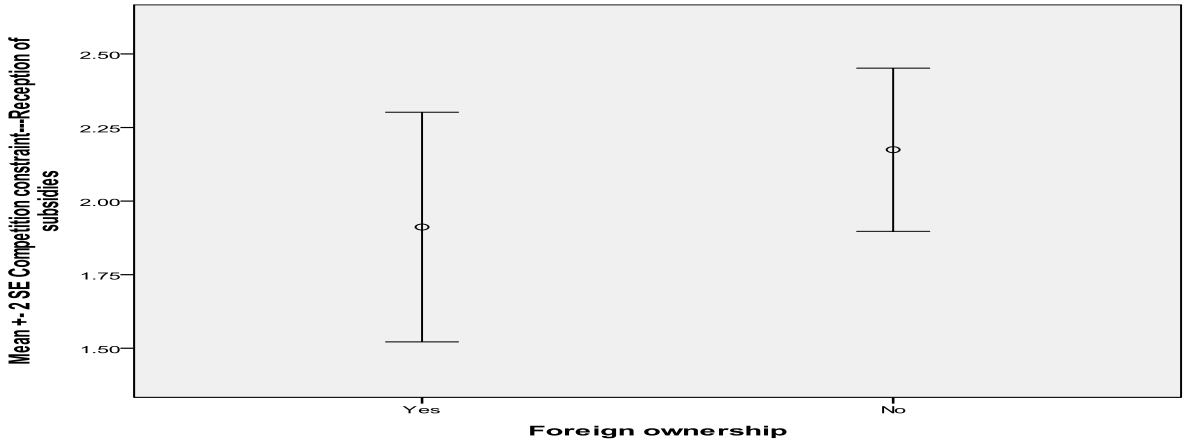
	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Reception of subsidies	Yes	34	1.9118	1.13798	.19516
	No	63	2.1746	1.10044	.13864

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Reception of subsidies	Equal variances assumed	.076	.784	-1.109	95	.270	-.26284	.23698	-.73331	.20763
	Equal variances not assumed			-1.098	65.793	.276	-.26284	.23940	-.74083	.21516

According to the table 6.5, there are 38.1% of domestic firms that are problematically constrained by "reception of subsidies", while only 20.6% of foreign firms thinks this constraint is problematic. However, this constraint is significant at 78.4% level (table 7.8). Based on the data related to the situation of equal variances assumed, the p value is 0.270 that is still more than 0.05. We thus fail to conclude that there is a difference in this competition constraint of "reception of subsidies". The Error Bar shows that the average constraint level of reception of subsidies faced by the group of domestic firms is higher than the group with foreign firms (graph 7.2). The graph 7.2 also displays that the domestic firms show less variation about this constraining factor than the foreign firms.

Additionally, the range of concerns of domestic firms group focuses on a relatively higher level than that of foreign firms, as the variation within the domestic firms' group is higher. This result indicates that foreign firms may be beneficial from subsidies, and they are therefore less concerned than the domestic firms are. This may also indicate that the competitors of domestic firms have more access to subsidies than the competitors of foreign firms. In other words, foreign firms have more changes than domestic firms to receive or access subsidies.

Graph 7.2 The error bar showing the standard error and mean differences--- Reception of subsidies



7.3.1.3 Violation of patent by the competitors

The two kinds of firms do not show proportional differences in their perception with regards to this constraint. This difference is significant at 64.7% level (Table 7.9), which is more than 5%. The difference is significant at 34.4% upon the assumption of equal variances, and that is still not less than or equal to 5%. The fact that there is no difference between the two categories is also related the case that China is internationally regarded as one of the worst offenders against intellectual property rights, even after its accession of the WTO. As the United States Trade

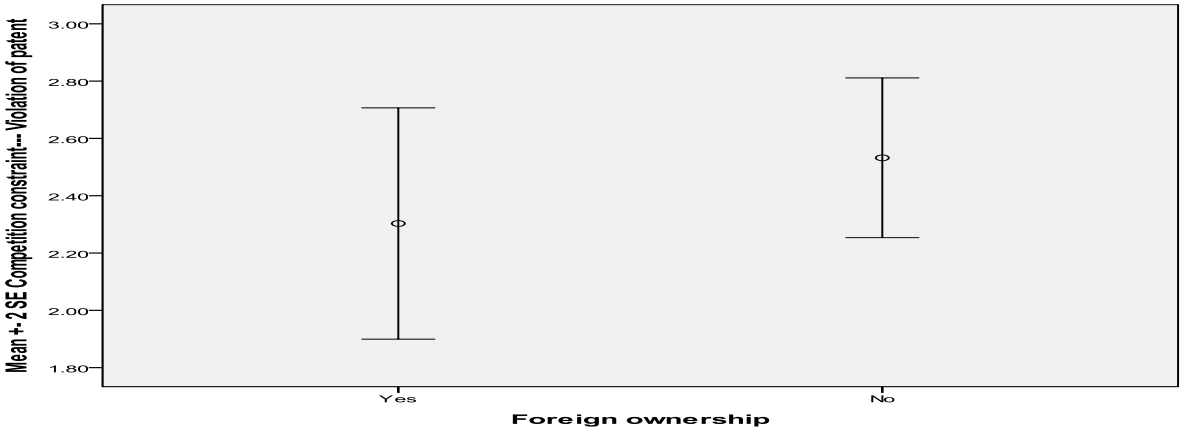
Representative (2011: 3) notes, "counterfeiting and piracy remain at unacceptably high levels and continue to cause serious harm to U.S. businesses across many sectors of the economy. … The U.S. International Trade Commission estimated that U.S. businesses suffered a total of $48 billion in lost sales, royalties and license fees due to IPR infringement in China in 2009---a figure that is more than two-thirds the value of the $69 billion in U.S. goods exported to China in the same year".

Table 7.9 Levene's test of the competition constraint---Violation of patent

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Violation of patent	Yes	33	2.3030	1.15879	.20172
	No	62	2.5323	1.09721	.13935

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Violation of patent	Equal variances assumed	.211	.647	-.951	93	.344	-.22923	.24108	-.70796	.24950
	Equal variances not assumed			-.935	62.375	.353	-.22923	.24517	-.71926	.26080

Graph 7.3 The error bar showing the standard error and mean differences--- Violation of patent



The Error bar shows foreign firms are less constrained than domestic firms (graph 7.3). In terms of patent, the domestic firms are less protected than foreign firms. This could be the consequence of international agreements signed by China to protect the intellectual right for foreign firms rather than domestic firms (Chapter 3: section 3.3.2.1). Thus, the continuous efforts to attract FDI would be able to make the foreign firms in a relative better position of the patent protection, compared to the domestic firms. This unfair competition might become more severe because of the law connected with the foreign firms, which has made Chinese legislation regarding patent protection compatible with the international standards. These would invoke that the protection of the patent and all intellectual rights would be enforced more when it involves foreign investors rather than domestic firms in practice.

7.3.1.4 Paying no duties by the competitors

Table 7.10 Levene's test of the competition constraint---Paying no duties

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Paying no duties	Yes	34	2.0882	1.19005	.20409
	No	57	1.9825	1.04354	.13822

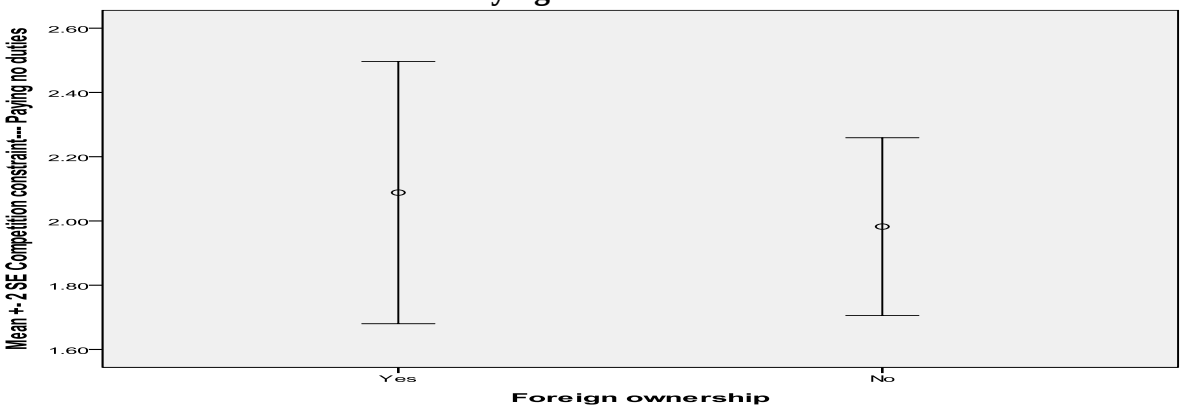
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Paying no duties	Equal variances assumed	2.412	.124	.444	89	.658	.10578	.23839	-.36790	.57946
	Equal variances not assumed			.429	62.469	.669	.10578	.24649	-.38688	.59844

The two kinds of firms do not have differences in their perception about "paying no duties by the competitors", as the difference is significant at 12.5 % (table 7.4). Given equal variances assumed, the difference is significant at 65.8% level, the difference is still not significant. The Error bar (graph 7.4) confirms that their means are close to each other. In other words, the foreign firms perceive no more problematic constraint than the domestic firms. As the firms in the WBES sample face the relatively same number of competitors, the small difference between

them might be related to other factors, such the firm size and the access to the network that would allow them not to pay import duties.

Foreign firms constitute once again a heterogeneous group (graph 7.4). The variation inside this group is bigger than the one existing in the group of domestic firms. This variation implies that not all foreign owners have the same reaction according to this constraint. This might be because this category embodies firms with different sizes and different sectors. The discrepancies in size and sector constitute one of the most probable factors that are able to explain the variances in the perception of the firms. In addition, the variation within this group could denote the differences in the level of abilities to cope with this constraint across the firms. It could infer to the possibility that within this group some firms have a comparative advantage in using informal networks allowing them to reduce the intensity of the constraint. This could be due to the help of their domestic partners or to the fact that these firms with foreign owners have been operating in China already. This could confirm the different abilities in using some informal connections to avoid some formal rules (Eden and Molot, 2002).

Graph 7.4 The error bar showing the standard error and mean differences--- Paying no duties



7.3.1.5 Foreign producers selling below international prices

For the constraint of foreign producers selling below international prices, the Levene test implies the significant level of the difference is 5.9% (table 7.11). We can conclude that the difference between the two categories constrained by foreign producers selling below international prices is acceptable once we extend our critical range to 90%. Compared to the group of the domestic firms, the foreign firms are more constrained by this factor (table 7.11).

The graph 7.5 shows that the variation inside the foreign firm group is bigger than the one existing in the domestic firm group. As both operate in a same market of China, the different

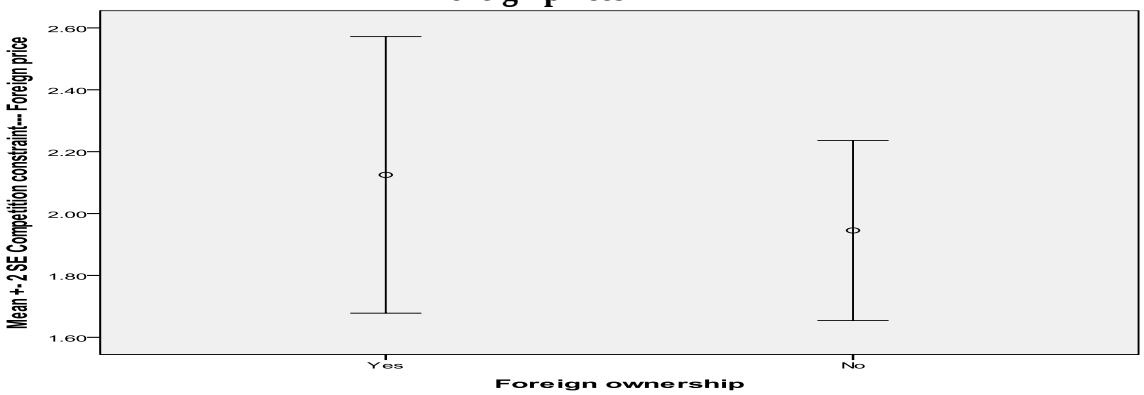
constraints could principally be associated with the products or the services that those firms provide. In this context, the foreign firms produce similar goods that could be made internationally, and they are thus easily and directly affected by this constraint of "foreign producers selling below international prices". The domestic firms might still supply goods and service as domestic standards. Although the quality of goods and service are not as good as international level, market segmentation could still help domestic firms ease the constraint of selling below international prices by competitors.

Table 7.11 Levene's test of the competition constraint---Foreign prices

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Foreign prices	Yes	32	2.1250	1.26364	.22338
	No	55	1.9455	1.07872	.14545

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Foreign prices	Equal variances assumed	3.666	.059	.702	85	.484	.17955	.25560	-.32865	.68774
	Equal variances not assumed			.674	56.980	.503	.17955	.26656	-.35424	.71333

Graph 7.5 The error bar showing the standard error and mean differences---Foreign prices



7.3.1.6 Domestic producers unfairly sell below my prices

For the constraint of domestic producers unfairly selling below my prices, the difference is significant at 39.6% (table 7.12). In the condition of equal variances assumed, the difference is significant at 60.5%, which is still far more than 5%. Thus, the two categories do not show

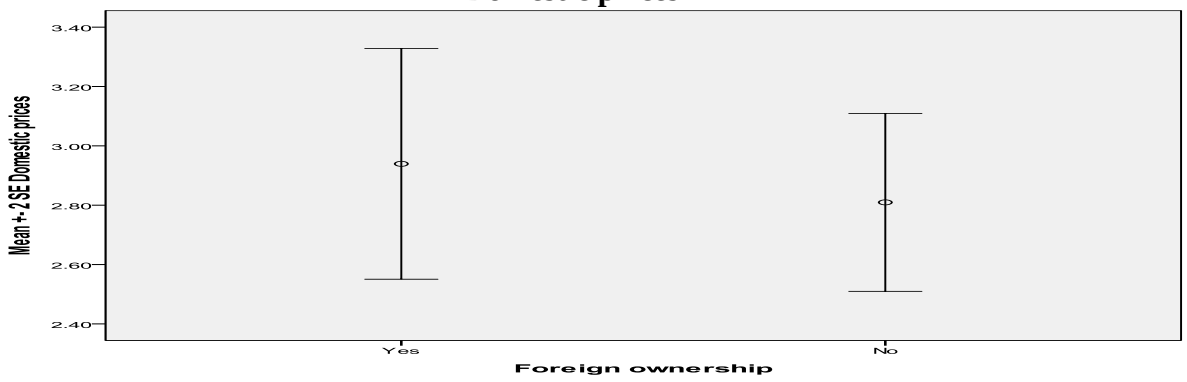
proportional differences in their perception regarding this constraint. The error bar implies that the variation inside the foreign firm group is slightly smaller than the domestic firm group (graph 7.6). Moreover, the difference between two types of firms (mean difference in table 7.12: 2.9394-2.8095=0.1299) is also smaller than the constraint of foreign producers selling below international prices (mean difference in table 7.11: 2.1250-1.9455=0.1795). In fact, the domestic producers include both foreign and domestic firms, which are able to produce both goods with international standards or with domestic standards. If the market price is unfairly below the price of the firms surveyed, both foreign and domestic firms are under the price threat as market segmentation cannot help either group to ease the price pressure in competition.

Table 7.12 Levene's test of the competition constraint---Domestic prices

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Domestic prices	Yes	33	2.9394	1.11634	.19433
	No	63	2.8095	1.18943	.14985

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Domestic prices	Equal variances assumed	.728	.396	.519	94	.605	.12987	.25036	-.36722	.62696
	Equal variances not assumed			.529	68.814	.598	.12987	.24540	-.35971	.61945

Graph 7.6 The error bar showing the standard error and mean differences---Domestic prices



7.3.1.7 Summery of the competition constraints

The analysis of the competition constraints is summarised in table 7.12.1. According to the competition constraints in the WBES, the foreign firms are less constrained by "collusion for credit", "reception of subsidies", and "violation of paten". At the same time, they are more constrained by "paying no duties", "foreign prices" and "domestic prices". Based on the analysis above, the author has to reject the hypothesis 1a. In other words, the foreign firms are not totally less constrained by the constraints of business competition than the domestic firms. On the contrary, they might be more constrained.

Table 7.12.1 Summery of the difference in the competition constraints

Competition constraints	**H1a:** The foreign firms are less constrained by the constraints of business competition than the domestic firms.
Collusion for credit	**Accepted**
Reception of subsidies	**Accepted**
Violation of patent	**Accepted**
Paying no duties	**Rejected**
Foreign prices	**Rejected**
Domestic prices	**Rejected**

7.3.2 Finance constraints

7.3.2.1 Financing as a general constraint

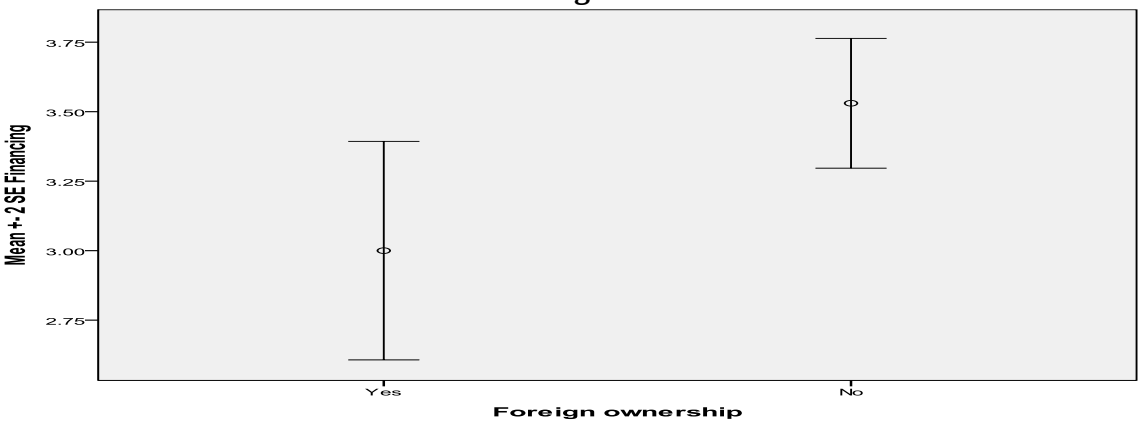
As a general constraint of the WBES, the feedback of finance is significantly different at 95% due to foreign ownership (table 7.13). Based on the difference of foreign ownership, this is the unique constraint that is significant at 95% among the WBES general constraint (table 7.1). The foreign firms are less constrained by this factor than the domestic firms (graph 7.7). Based on the mean and standard deviation in Table 7.13, the variation inside the group of foreign firms is bigger than the one in the group of domestic firms. This variation implies that the foreign firms are differently constrained by this factor in the group of foreign firms than the domestic firms are in the domestic firm group.

Table 7.13 Levene's test of financing as a general constraint

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Financing	Yes	35	3.0000	1.16316	.19661
	No	66	3.5303	.94819	.11671

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Financing	Equal variances assumed	4.022	.048	-2.469	99	.015	-.53030	.21477	-.95645	-.10416
	Equal variances not assumed			-2.319	58.393	.024	-.53030	.22864	-.98792	-.07269

Graph 7.7 The error bar showing the standard error and mean differences---financing



7.3.2.2 Inadequate credit/financial information on customers

In Chapter 6, both foreign and domestic firms regard "inadequate credit information on customers" as the most important business constraint (table 6.6). The Levene's test displays that the difference is not significant at 95% (table 7.14). Even if equal variances assumed, it is significant at 70.8%. In other words, this constraint is not significantly different at 95% due to the factor of foreign ownership. The Error bar indicates that the foreign firms are less constrained by this constraining factor than the domestic firms (graph 7.8). In addition, the group of foreign firms holds a bigger variation compared to the variation existing in the group of domestic firms (table 7.14 and graph 7.8). The group of foreign firms displays a larger heterogeneity in the responses, implying that not all foreign firms face the constraints similarly. One reason might be that the differences such as the size or sector of these firms also play a role in explaining the disparities between the firms' perceptions within the group.

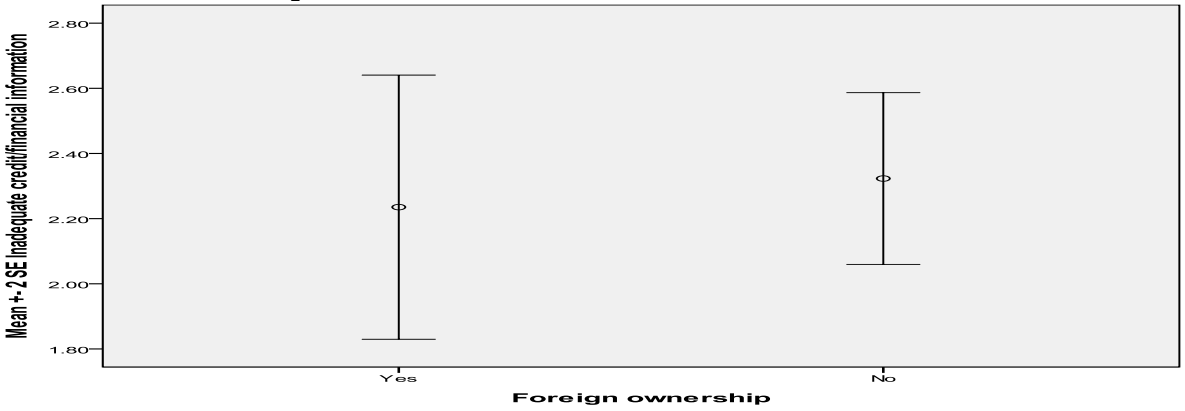
This outcome indicates a better ability that foreign firms have in accessing the credit and financial information about their customers than domestic firms. This could also be connected with the fact that domestic firms have to depend on the domestic financial market. Additionally, it refers to the fact that foreign firms have a better access than domestic firms to the different market networks and hence the information about the firms that operate in their business environment, such as acquiring information from the banks in a more efficient manner through different channels (Chapter 3: section 3.3.2.2). Therefore, they would not be much aware about this constraint as the domestic firms.

Table 7.14 Levene's test of the finance constraint--- Inadequate credit/financial information on customers

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Credit	Yes	34	2.2353	1.18216	.20274
	No	65	2.3231	1.06225	.13176

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Credit	Equal variances assumed	1.032	.312	-.376	97	.708	-.08778	.23377	-.55175	.37619
	Equal variances not assumed			-.363	61.138	.718	-.08778	.24179	-.57125	.39568

Graph 7.8 The error bar showing the standard error and mean differences--- Inadequate credit/financial information on customers



7.3.2.3 High interest rate

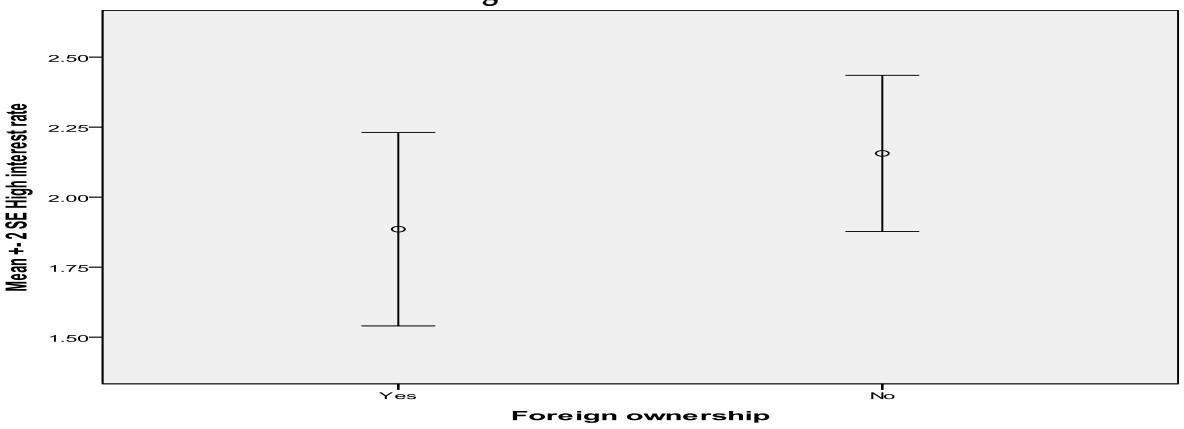
In Chapter 6, table 6.6 shows that the two firms groups are differently constrained by high interest rate. The Levene test result confirms that the equality of variances between the two groups is not significant at 95%. Even after the equality of variances is assumed, it is significant at 23.8%. The author thus rejects the equal variance of this constraint on the foreign firms and domestic firms.

Table 7.15 Levene's test of the finance constraint--- High interest rate

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
High interest rate	Yes	35	1.8857	1.02244	.17282
	No	64	2.1563	1.11581	.13948

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
High interest rate	Equal variances assumed	2.645	.107	-1.187	97	.238	-.27054	.22789	-.72283	.18176
	Equal variances not assumed			-1.218	75.442	.227	-.27054	.22208	-.71291	.17184

Graph 7.9 The error bar showing the standard error and mean differences--- High interest rate



The table 7.15 and graph 7.9 show that the foreign firms are less constrained by this factor than the domestic firms. In China, the foreign firms might have two main ways to solve this problem.

In the short term, if they are more efficient in business operation and in producing goods whose quality is better than domestic firms are, they might be able to release this constraint internally. In the long run, as the internal organisation and the products are similar between the two firm groups, the only way for the foreign firms to overcome the obstacle of high interest rate is to find alternative finance approach with low interest rate. This difference in the perception can be expected as the foreign owners have a large access to the credit market either in their home country or in the host country. In fact, this alternative approach could either be available in China due to its special finance supports for the foreign firms, according to a number of official documents, or be obtainable through overseas finances, which will be connected with investigation of the next finance constraint (Chapter 3: section 3.3.2.2).

7.3.2.4 Access to foreign banks

Table 7.16 Levene's test of the finance constraint--- Access to foreign banks

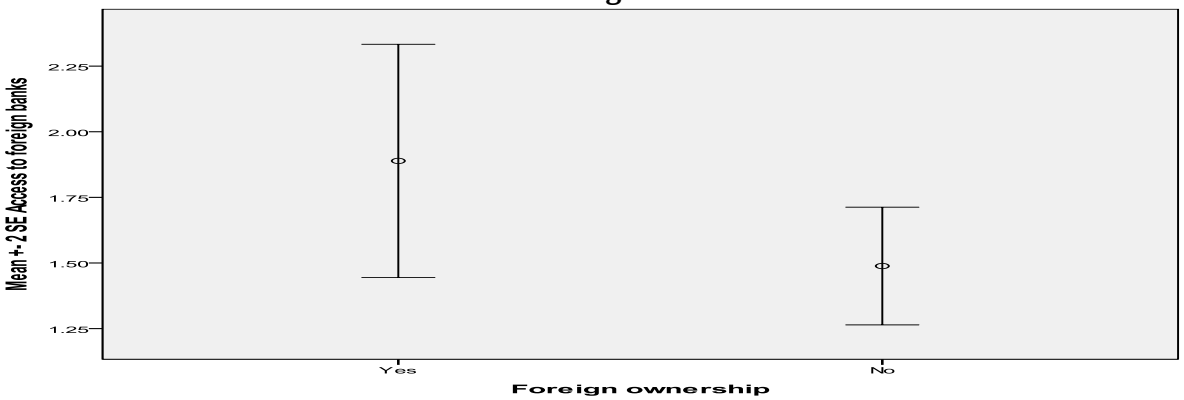
	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Access to foreign bank	Yes	27	1.8889	1.15470	.22222
	No	43	1.4884	.73589	.11222

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Access to foreign bank	Equal variances assumed	10.608	.002	1.775	68	.080	.40052	.22562	-.04970	.85073
	Equal variances not assumed			1.609	39.367	.116	.40052	.24895	-.10288	.90392

Table 7.16 shows that the equality of variances is significant at 99%. Moreover, among all factors of financing constraints in the WBES, this factor is the only one constraint whose equality of variances is significant at 95% level. Recalling the fact that the foreign firms are less constrained by the constraining factor of "high interest rate" than the domestic firms, the conceptions upon the constraint of "access to foreign banks" confirms that foreign firms take the

advantage of overseas finance in business operation and in competition, such as the access to foreign banks. Thus, they are more constrained by the factor of access to foreign banks.

Graph 7.10 The error bar showing the standard error and mean differences--- Access to foreign banks



7.3.2.5 summery of financing constraints

The summery is displayed in Table 7.16.1. The foreign firms are more constrained by "access to foreign bank". On the other hand, the foreign firms are less constrained by "finance" as a general constraint, "inadequate credit/financial information on customers", and "high interest rate". Considering finance as a general constraint, the hypothesis 2a is accepted. However, the hypothesis 2a should be rejected in the consideration of specific financial constraints. As a whole, the author rejects the hypothesis 2a.The domestic firms have to depend on domestic finance, and they are thus more constrained by "high interest rate". On the contrary, in addition to some special finance supports in China, the foreign firms can use overseas finances instead of domestic finance with high interest rates, and they are more constrained by "access to foreign bank". Under the WTO agreement, although foreign banks are gradually permitted to open the business in China, they cannot equally organise their business in the same way as the Chinese domestic banks. As a result, "access to foreign banks" is not 100% open. That is the fundamental reason behind this finance constraint.

Table 7.16.1 Summery of difference in the finance constraints

Finance constraints	**H2a**: The foreign firms are less constrained by the constraints of finance than the domestic firms.
Finance as a general constraint	**Accepted**
Inadequate credit/financial information on customers	**Accepted**
High interest rate	**Accepted**
Access to foreign banks	**Rejected**

7.3.3 Rules and regulation constraints

7.3.3.1 Labour regulations

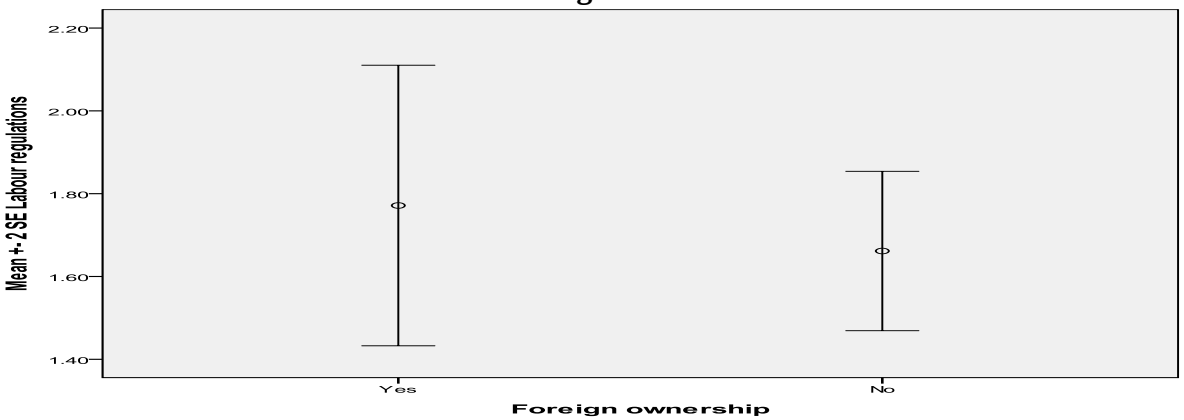
Table 7.17 displays that the Levene test for equality of variances between two groups is significant at 94.6%, which is very close to 95%. The graph 7.11 indicates that foreign firms are more constrained by "labour regulations" than domestic firms. Moreover, the group of foreign firm holds a bigger variation than the one of domestic firms, and the group of foreign firms displays a larger heterogeneity.

Table 7.17 Levene's test of rules and regulation constraints--- Labour regulations

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Labour regulations	Yes	35	1.7714	1.00252	.16946
	No	65	1.6615	.77615	.09627

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Labour regulations	Equal variances assumed	3.753	.056	.608	98	.544	.10989	.18061	-.24852	.46830
	Equal variances not assumed			.564	56.369	.575	.10989	.19489	-.28047	.50025

Graph 7.11 The error bar showing the standard error and mean differences--- Labour regulations



Differed from the special financing arrangement for the foreign firms, the Chinese government applies labour regulations equally on both foreign firms and domestic firms. There are also a number of labour regulations designed for the foreign firms only, such as local employment

ratio and labour working environment. Accordingly, the labour regulations for the foreign firms are actually severe than those for domestic firms. The World Bank notes the labour regulation in China seems to be more rigid than the world average (table 7.17.1). In this context, the result of our analysis is a reasonable outcome as the foreign firms are more constrained by "labour regulations" than the domestic firms (The rigidity of employment index measures the regulation of employment, specifically the hiring and firing of workers and the rigidity of working hours. This index is the average of three subindexes: a difficulty of hiring index, a rigidity of hours index, and a difficulty of firing index. The index ranges from 0 to 100, with higher values indicating more rigid regulations.)

Table 7.17.1 Rigidity of employment index

	2008	2009
China	31	31
World average	28	27

Source: World Bank, Doing Business project (2008 & 2009)

7.3.3.2 Foreign exchange regulations

Table 7.18 Levene's test of rules and regulation constraints--- Foreign exchange regulations

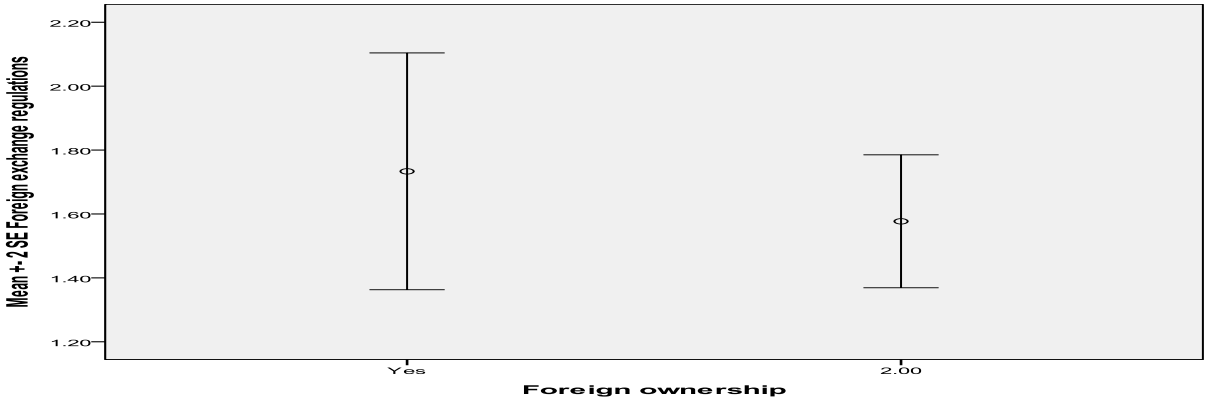
	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Foreign exchange regulations	Yes	30	1.7333	1.01483	.18528
	No	52	1.5769	.75006	.10402

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Foreign exchange regulations	Equal variances assumed	3.286	.074	.797	80	.428	.15641	.19615	-.23395	.54677
	Equal variances not assumed			.736	47.478	.465	.15641	.21248	-.27093	.58376

Based on table 7.18 and graph 7.12, the foreign firms are more constrained by the constraining factor of foreign exchange regulations than the domestic firms. In table 7.18, the Levene test

value for the equality of variances is 0.074 that is not less than or equal to 0.05. In addition, in the condition of equal variances assumed, the p value of two tailed is 0.428, which is far more than 0.05. Therefore, when facing the constraint of foreign exchange regulations, we fail to find a difference significantly related to the factor of foreign factor. The different responses could be due to other reasons. Clearly, though Chinese governments have applied several rules on the foreign firms in product supply, these firms still have to import a number of necessary goods and service that is not domestically available in China. Consequently, they are more constrained by foreign exchange regulations than the domestic firms are as the domestic firms may not depend on frequent overseas business. Apart from this difference, graph 7.12 also shows that, the foreign firm group holds a bigger variation compared to the one of domestic firms, and the category that includes foreign firms displays a larger heterogeneity. A larger heterogeneity could be again associated with the size and the industrial sector of their business.

Graph 7.12 The error bar showing the standard error and mean differences--- Foreign exchange regulations



7.3.3.3 Customs regulations

In table 7.19, Levene's test is 0.162 that is not less than and equal to 0.05. Given equal variances assumed, the p value 0.640 is also more than the level of 0.05. We again cannot observe a significant difference because of the foreign ownership. Normally, both the foreign exchange regulations and the customs regulations should be connected with the business, the firm size, and the industrial sector. However, the information in section 7.3.3.2 and 7.3.3.3 are evidently diverse. On one side, the domestic firms are more constrained by "customs regulations" than the foreign firms are. However, domestic firms are less constrained by "foreign exchange regulations". That is to say, domestic firms have to face the obstacles of import and export, but they do not have to worry about the international payment problems. The reason is international payment is actually out of their own control and under the control of Chinese government (Chapter 3: section 3.3.2.3). On the other side, according to the results of economic reforms in

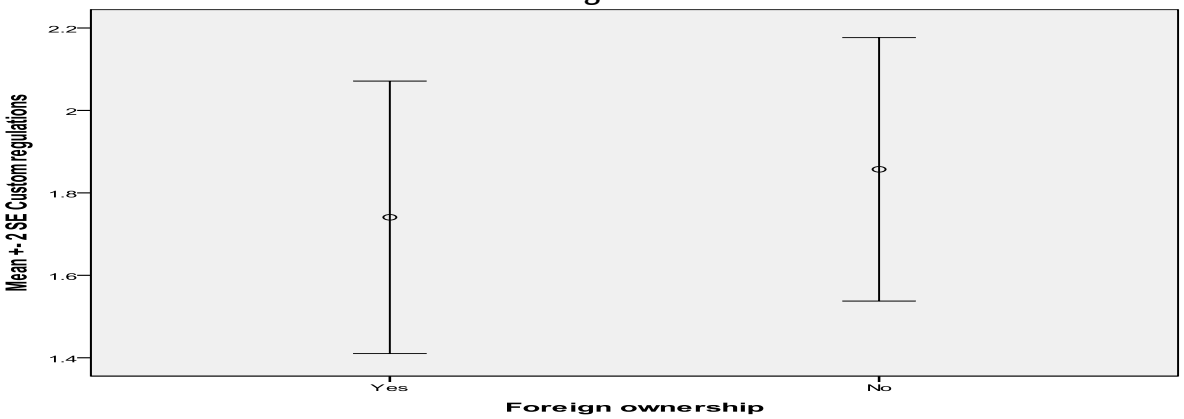
China, the foreign firms have to deal with problems of international payment directly related to their business and are given more freedom in the business operation related to the procedure of import and export. This issue can only be explained by the special official supports in customs management, to attract FDI in China (Chapter 3: section 3.3.2.3).

Table 7.19 Levene's test of rules and regulation constraints--- Customs regulations

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Customs regulations	Yes	27	1.74	.859	.165
	No	49	1.86	1.118	.160

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Customs regulations	Equal variances assumed	1.993	.162	-.469	74	.640	-.116	.248	-.610	.378
	Equal variances not assumed			-.506	66.030	.614	-.116	.230	-.575	.343

Graph 7.13 The error bar showing the standard error and mean differences--- Customs regulations



7.3.3.4 High taxes

In table 7.20, the Levene's test result is 0.902 and the p value is 0.146 upon equal variances assumed. We cannot find the difference of high taxes constraint because of the foreign ownership factor. In fact, the two kinds of firms both consider "high taxes" as the top

constraining factor one among the rules and regulation constraints (table 6.7). The error bar in graph 7.14 confirms that the foreign firms are more constrained by "high taxes", and the variation of either group is very close to each other. That is to say, no matter of the size and the sector, they both have to face the serious constraint of high taxes.

Table 7.20 Levene's test of rules and regulation constraints--- High taxes

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
High taxes	Yes	32	2.6563	1.12478	.19883
	No	62	2.3065	1.08021	.13719

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
High taxes	Equal variances assumed	.015	.902	1.467	92	.146	.34980	.23844	-.12376	.82336
	Equal variances not assumed			1.448	60.564	.153	.34980	.24157	-.13332	.83291

Graph 7.14 The error bar showing the standard error and mean differences--- High taxes

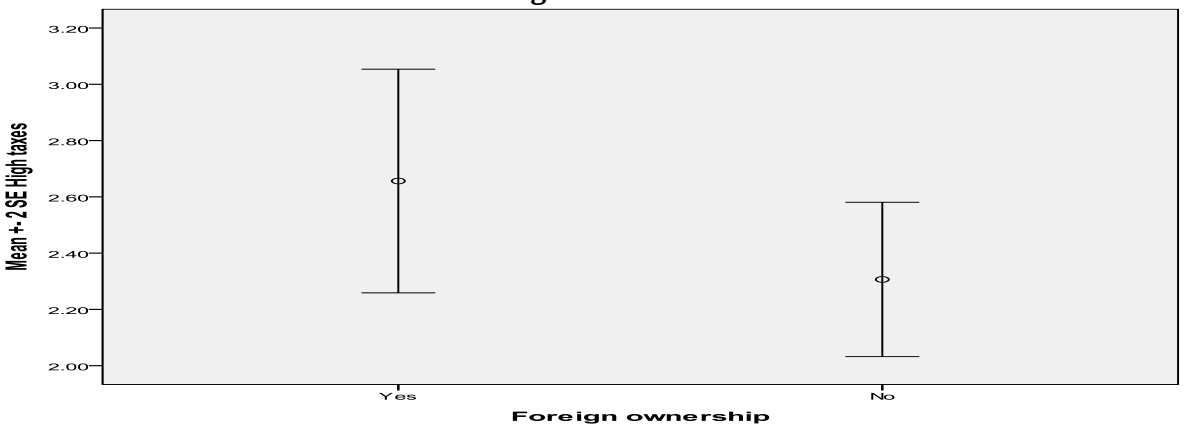


Table 7.20.1: Total tax rate (% of profit)

	2005	2006	2007	2008	2009
China	80.0	80.7	81.2	79.9	78.5
World	51.4	49.7	49.5	49.4	48.3

Source: World Bank, Doing Business project (http://www.doingbusiness.org/)

Note: Total tax rate is the total amount of taxes payable by businesses (except for labor taxes) after accounting for deductions and exemptions as a percentage of profit.

Table 7.20.1 illustrates why the foreign firms feel they are more constrained by "high taxes" than the domestic firms. Evidently, the total tax rate in China is unbelievably high than the world average level. Although Chinese government has provided several tax advantages to the foreign firms, the actual effects are not as good as expected and "high tax" still remains as the top one in the category of rules and regulations constraint, because the foreign firms compare the tax rate in China to those in other countries. For domestic firms, they have been used to surviving in this business environment of high tax rate already. It is impossible for them to experience a low tax rate as the world average level at all. Thus, their concerns on this constraint are not as high as that of the foreign firms.

7.3.3.5 Tax administration regulations

Table 7.21 Levene's test of rules and regulation constraints--- Tax administration regulations

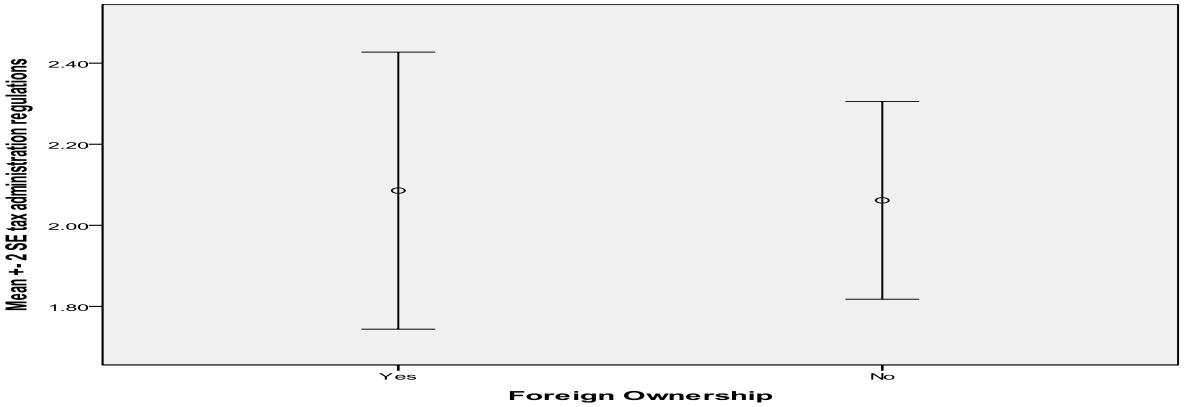
	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
tax administration regulations	Yes	35	2.0857	1.01087	.17087
	No	65	2.0615	.98230	.12184

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
tax administration regulations	Equal variances assumed	.802	.373	.116	98	.908	.02418	.20804	-.38868	.43703
	Equal variances not assumed			.115	68.022	.909	.02418	.20986	-.39459	.44294

For tax administration regulations, we again fail to observe the significant difference (table 7.21), and foreign firms are more constrained than the domestic firms. The proportional difference between the two groups is not as big as the other constraints. The average concerns of the two firm groups are very close to each other. In Graph 7.15, the variation of foreign firms is bigger that that of domestic firms. "Tax administration regulations" is another concern for

both the foreign firms and domestic firms. This indicates the role that the regulatory framework can play in the context of increasing or decreasing transaction costs. Normally, the problems specific to tax administration are mainly related to the lack of trust between the tax collectors and tax payers, inefficiency of the dispute settlement system and arbitrary estimation of the taxable profit (Fawzy, 1998). This is highly associated with other related problems such as tax evasion and taxpayer's high transaction costs in tax payment and uncertainty in negotiation amongst the parties and the level of bribery in the tax system (Asher, 2002).

Graph 7.15 The error bar showing the standard error and mean differences--- Tax administration regulations



7.3.3.6 Summery of Rules and regulations

Table 7.22 Summery of difference in the rules and regulation constraints

Rules and regulation constraints	**H3a**: The foreign firms are less constrained by the constraints of business rules and regulations than the domestic firms.
Labour regulation	**Rejected**
Foreign exchange regulation	**Rejected**
Custom regulation	**Accepted**
High taxes	**Rejected**
Tax administration regulation	**Rejected**

Among the constraints of rules and regulations, the foreign firms are only less constrained by the constraining factor of "custom regulation", and are more constrained by all other constraints of rules and regulations (table 7.22). The way in which foreign firms may feel more constrained could be explained by the fact that the system of tax administration and regulations related are too inefficient to cover the costs of foreign owners by giving more advantages in tax concessions and tax exemptions and related procedures. This could be a disappointing result of the policies and reforming efforts undertaken by Chinese authorities to attract FDI. Moreover, the variation of the perceptions in the group of foreign firms could reflect the fact that although

some foreign firms are more constrained than the domestic firms are, still some of them may face the same or even a lower level of constraint as the domestic firms. One of the consequences about these constraints is the potential bribery practices that could arise.

7.3.4 Corruption constraints

7.3.4.1 Corruption as a general constraint

Table 7.23 Levene's test of corruption constraints --- Corruption as a general constraint

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Corruption as a general constraint	Yes	33	1.8788	1.08275	.18848
	No	63	2.1111	1.12323	.14151

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Corruption as a general constraint	Equal variances assumed	.808	.371	-.974	94	.332	-.23232	.23844	-.70575	.24111
	Equal variances not assumed			-.986	67.221	.328	-.23232	.23569	-.70274	.23810

Graph 7.16 The error bar showing the standard error and mean differences--- Corruption as a general constraint

In table 7.23, corruption as a general constraint is not statistically significant to either firms with or without foreign ownership. Therefore, although the foreign firms are less constrained by the corruption than the domestic owned firms (graph 7.16), the ownership is not the reason resulting

in the different responses. In addition, variation among domestic firms is bigger than that of the foreign firms, which suggests the corruption situation of domestic firms more various than the foreign firms.

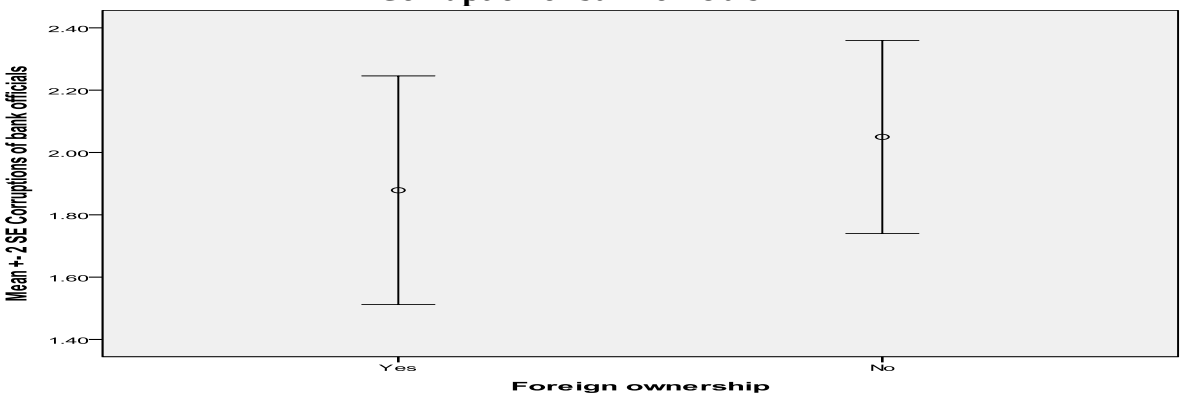
7.3.4.2 Corruption of bank officials

Table 7.24 Levene's test of corruption constraints --- Corruption of bank officials

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Corruption of bank officials	Yes	33	1.8788	1.05349	.18339
	No	60	2.0500	1.19922	.15482

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Corruption of bank officials	Equal variances assumed	3.025	.085	-.687	91	.494	-.17121	.24925	-.66632	.32390
	Equal variances not assumed			-.713	73.592	.478	-.17121	.24000	-.64947	.30705

Graph 7.17 The error bar showing the standard error and mean differences--- Corruption of bank officials



The other corruption constraint included in the WBES is the corruption of bank officials. The Error bar shows that the firms with foreign investors are less constrained than the domestic firms by the factor of corruption of bank officials (graph 7.17). As we failed to observe the difference at 95% level (table 7.24), the different responses on this constraining factor are not

because of the factor of with or without foreign ownership. In table 7.24, the standard deviation of foreign firms is 1.05349, which is smaller than that of domestic firms (1.19922). Therefore, the domestic firm group holds a bigger variation compared to the one of foreign firms, and the domestic firm group displays a larger heterogeneity. Thus, the constraints on domestic firms are more different than that of the foreign firms.

7.3.4.3 Summery of corruption

To sum up, the hypothesis 4a is rejected as the foreign firms are less constrained by corruption than the domestic firms (table 7.24.1). Consequently, it could be expected that the foreign owners should concern less about corruption than the domestic firms to get things done. However, this result is not pronounced as the difference when facing "corruption of bank officials" is only significantly related to the foreign ownership factor at 90%, less than the acceptance level of 95% in this research. In addition, the similar variance between the groups of foreign firms and domestic firms indicates that different responses of foreign firms to the constraint named "the corruption of bank officials" are similar to those of the domestic firms. This is also supported by the fact that both groups do not exhibit any discrepancies in their proportional perception with regards to corruption as a general constraint.

Table 7.24.1 Summery of difference in the corruption constraints

Corruption constraints	**H4a**: The foreign firms are more constrained by the constraints of corruption than the domestic firms.
Corruption as a general constraint	**Rejected**
Corruption of bank officials	**Rejected**

7.3.5 Judicial constraints

7.3.5.1 Fair and impartial, honest, quick, affordable, consistent, and enforceability

In the WBES, there are six constraining factors to describe the quality of court in China, including fair and impartial, honest, quick, affordable, consistent, and enforceability, measured from 1 (always) to 6 (never). The Levene's test shows that the foreign firms and domestic firms differentiate in their opinions about how fair and impartial the courts are, how honest they are, how consistent and how enforceable their decisions are as well as the easiness to obtain law and regulation. The difference based on the factor of enforceability is the unique judicial constraint that is significant at 95% (table 7.3). The difference in the perceptions also reflects the fact that the judicial system is not seen in the same way by all types of firms, in spite of the fact that very

similar percentage of the overall firms in the sample believe that the Chinese courts are frequently fair and impartial (65.6%), honest (56%), quick (41.8%), affordable (65.9%), consistent (61.4%), and enforceable (65.5%) (table 6.7).

These opinions are not homogenous amongst the group of foreign and domestic firms. The foreign firms are more constrained by "fair and impartial", "honest", "quick", "consistent", and "enforceability" (graph 7.18, graph 7.19, graph 7.20, graph 7.22 and graph 7.23). On the other hand, the foreign firms are less constrained by "affordable" (graph 7.21). Apart from the constraint of fair and impartial, the foreign firms embody large variation in the responses with regards to judicial constraints compared to those of the domestic firms. These results could be attributed to the possibility that the foreign firms may confront the legal system more often than the domestic firms. Consequently they would have different perception about the quality of the courts than the domestic firms.

Table 7.25 Levene's test of judicial constraints ---Fair and impartial

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
fair and impartial	Yes	33	3.1515	1.25303	.21812
	No	60	2.8000	1.29928	.16774

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
fair and impartial	Equal variances assumed	.212	.646	1.264	91	.209	.35152	.27810	-.20090	.90393
	Equal variances not assumed			1.277	68.118	.206	.35152	.27516	-.19754	.90057

Graph 7.18 The error bar showing the standard error and mean differences--- Fair and impartial

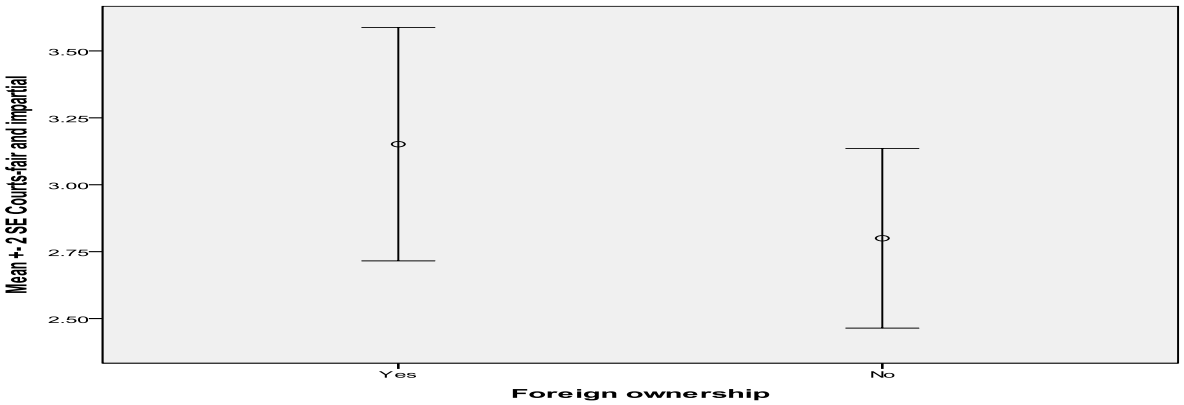


Table 7.26 Levene's test of judicial constraints --- Honest

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Honest	1.00	32	3.5000	1.29515	.22895
	2.00	59	3.1864	1.29288	.16832

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Honest	Equal variances assumed	.029	.866	1.104	89	.273	.31356	.28402	-.25078	.87789
	Equal variances not assumed			1.103	63.630	.274	.31356	.28417	-.25419	.88131

Graph 7.19 The error bar showing the standard error and mean differences--- Honest

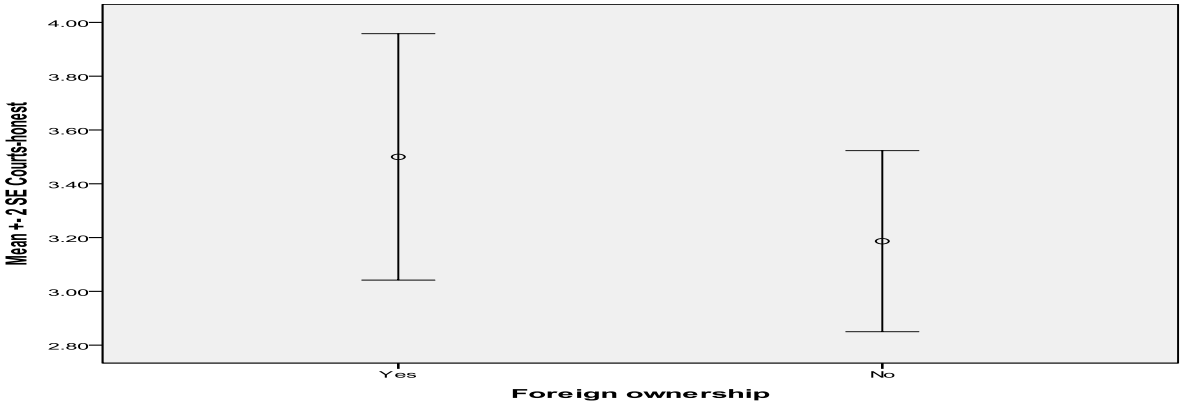


Table 7.27 Levene's test of judicial constraints --- Quick

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Quick	1.00	32	4.0000	1.27000	.22451
	2.00	59	3.4576	1.11914	.14570

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Quick	Equal variances assumed	.158	.692	2.105	89	.038	.54237	.25772	.03029	1.05446
	Equal variances not assumed			2.026	57.190	.047	.54237	.26764	.00647	1.07828

Graph 7.20 The error bar showing the standard error and mean differences--- Quick

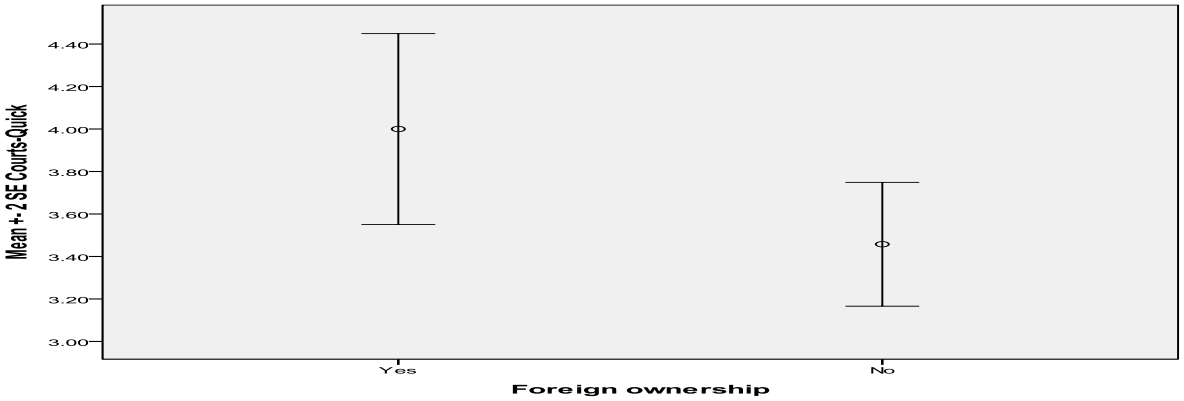


Table 7.28 Levene's test of judicial constraints --- Affordable

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Affordable	1.00	30	3.0000	1.17444	.21442
	2.00	55	2.9818	1.00905	.13606

	Levene's Test for Equality of Variances	t-test for Equality of Means

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Affordable	Equal variances assumed	1.399	.240	.075	83	.940	.01818	.24280	-.46474	.50110
	Equal variances not assumed			.072	52.485	.943	.01818	.25395	-.49129	.52765

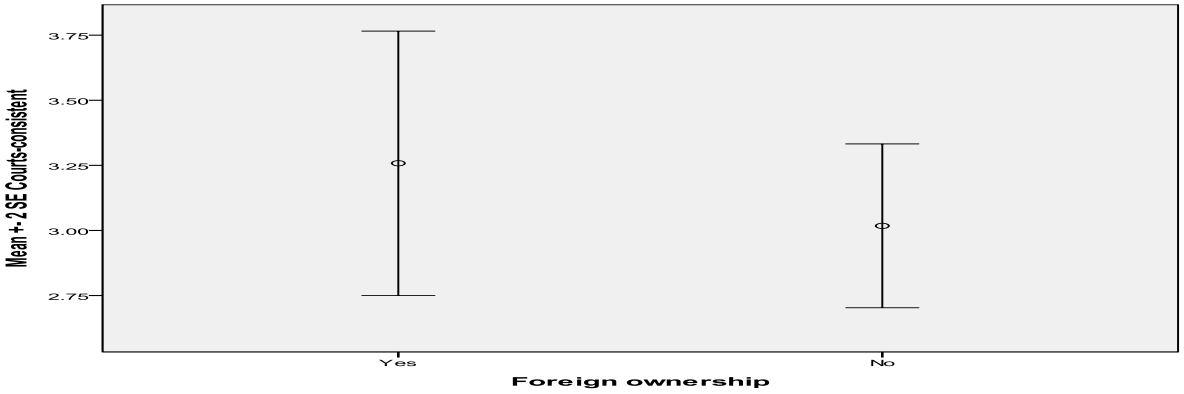
Graph 7.21 The error bar showing the standard error and mean differences--- Affordable

Table 7.29 Levene's test of judicial constraints --- Consistent

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Consistent	1.00	31	3.2581	1.41345	.25386
	2.00	57	3.0175	1.18760	.15730

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Consistent	Equal variances assumed	2.397	.125	.848	86	.399	.24052	.28363	-.32332	.80436
	Equal variances not assumed			.805	53.253	.424	.24052	.29865	-.35842	.83947

Graph 7.22 The error bar showing the standard error and mean differences--- Consistent



7.3.5.2 Enforceability

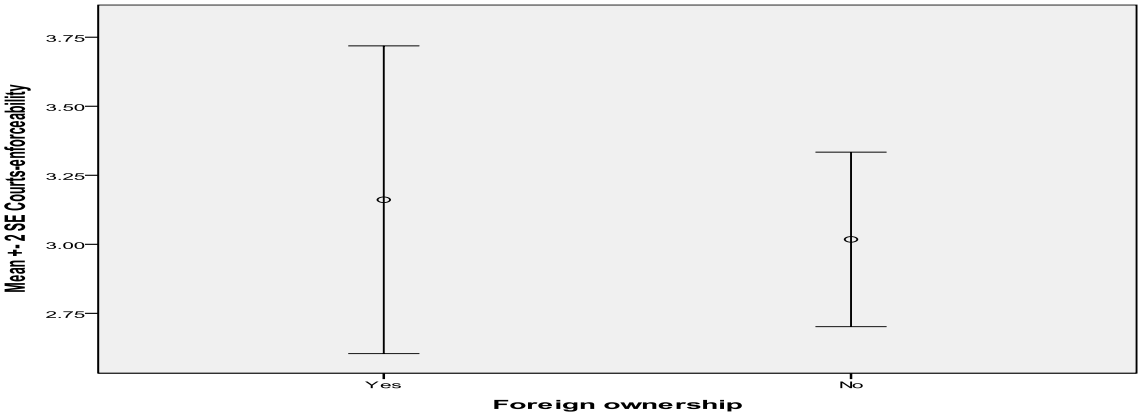
Among the judicial constraints, enforceability is the unique one that is significant at 95%. Table 8.30 displays that the foreign firms are more constrained by the constraining factor of "court-enforceability" than the domestic firms. Moreover, the standard deviation of foreign firms (1.55127) is bigger than that of domestic firms (1.18308) (table 7.30). Therefore, the opinions of foreign firms embody large variation in the responses of this judicial constraints compared to those of the domestic firms.

Table 7.30 Levene's test of judicial constraints --- Enforceability

	Foreign ownership	N	Mean	Std. Deviation	Std. Error Mean
Enforceability	Yes	31	3.1613	1.55127	.27862
	No	56	3.0179	1.18308	.15810

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Enforceability	Equal variances assumed	4.819	.031	.484	85	.630	.14343	.29657	-.44622	.73309
	Equal variances not assumed			.448	49.623	.656	.14343	.32035	-.50012	.78699

Graph 7.23 The error bar showing the standard error and mean differences--- Enforceability



7.3.5.3 Summery of the judicial constraints

Among these six judicial constraints in the WBES, the foreign firms are more constrained by all six factors of judicial constraints in China (table 7.30.1), and the author rejects the hypothesis 3a. The different judicial constraints faced by foreign firms may be connected with the sector, size, corruption, location and firm age. Domestic firms are more familiar with the inefficient judicial system. Additionally, there is a tradition that the domestic firms try to avoid to use the judicial system to deal with the problems, while the foreign firms usually choose judicial system due to their original customs. As Reinstein (2005: 6) noted, "Mediation or conciliation has been utilized in China to resolve civil disputes for over two thousand years. China's widespread preference for avoidance of the courts has led to its high utilization of arbitration. As a result, China has some of the biggest and most widely utilized arbitration bodies in the world. The Chinese preference to use extra-legal means is largely due to three factors: Confucian philosophy, an underdeveloped court system, and the influence of communism." Therefore, the domestic firms may engage more in some informal ways to resolve disputes outside courts rather than facing the costs and the uncertainty associated with the decisions of the judicial system. The domestic firms which have to resort to courts for disputes settlements would be more or less comfortable with the decisions of the courts and the efficiency of the legal procedures. This could be due to the possibility that the domestic firms have more access to social network that allows them to guarantee the courts decisions and resolve disputes in less costly manner. This is a common situation in an environment where informal networks are used (Akimova and Schwodiauer, 2003), regarding to a better access to the local network that enjoyed by these firms.

Table 7.30.1 Summery of difference in the judicial constraints

Judicial constraints	**H5a**: The foreign firms are less constrained by legal constraints than domestic firms.
Fair and impartial	**Rejected**
honest	**Rejected**
quick	**Rejected**
affordable	**Rejected**
consistent	**Rejected**
enforceability	**Rejected**

7.3.6 Summary of the foreign firms and domestic firms

This section examines the relations between the constraining factors and whether these constraints affect the business of foreign firms and domestic firms differently. Based on the results of Levene's test and Error bar, there are some proportional discrepancies in the perceptions regarding to the business constraints. The results also indicate the disparities in the perception to the constraints are connected with the factor of foreign ownership as well as the business environment in China. The foreign firms are less constrained by "custom regulations" than domestic firms. In the category of finance constraints, the foreign firms are less constrained by "high interest rate". When facing the corruptions, the foreign firms' perception to the constraints related to "the corruption of bank officials" is lower. The results also give an indication on the potential comparative advantage that the domestic firms have over the foreign firms in matters related to "labour regulation" and "foreign exchange regulations" in general as well as their ability to avoid "access to foreign bank". In the area of competition constraints, the domestic firms are less constrained than the foreign firms by "paying no duties" and "foreign prices". Moreover, among the judicial constraints, the domestic firms are less constrained than the foreign firms. These results also reflect the potential advantage that the domestic firms have compared to the foreign firms when accessing the domestic network. This access is part of the accumulative social capital that the domestic firms have been undertaken along their existence in the Chinese business environment. The social network allows them to pool resources, share information, generate trust, and secure their predictable behaviour and assuring the outcome of some decision makers (Adler and Kwon, 2002). The domestic firms have already been part of this network or at least more involved in this network more than the foreign firms in China.

Among the constraints in the WBES, the Levene's test shows that there are three factors that are significant at 95% because of the foreign ownership factor, which includes financing as a general constraint, enforceability as judicial constraint, and access to foreign bank as a finance

constraint. Based on the NIEs, these three constraints all belong to the formal institutions. The constraints of informal institutions are all insignificant at 95%. Moreover, the large variance shows that the group of foreign firms and domestic firms is not homogenous. This would indicate that not all foreign firms perceive the obstacles in the same way. Some of them may value the constraints as much as the domestic firms. This would indicate that some foreign firms can have similar access to the network of Chinese business environment as the domestic firms. Thus, the variation within the groups raises the question about whether the other factors, i.e. the firm size and the private ownership, also play a role in the firm's ability to be involved in the network and to take the advantage of this network. This question will be investigated in the following sections.

7.4 Private firm and non-private firm category

This section investigates differences between the perceptions of private firms and non private firms about the same constraining factors, such as finance constraints, competition constraints, judicial constraints, corruption constraints, rules and regulations constraints. The Levene's test compares the homogeneity of the variances between private firms and non private firms, the two types of firms seem to differentiate in their perceptions regarding to the same constraint (table 7.31, table 7.32, table 7.33, table 7.34, table 7.35 and table 7.36). Because of the difference related to private ownership, "**financing**" is the only one significant general constraint, and "**Paperwork**" is the unique significant constraining factor among the specific constraints.

Table 7.31 Levene's test of the general constraints (private)

Test of Homogeneity of Variances

General constraint	Levene Statistic	df1	df2	Sig.
Financing	7.091	1	99	.009
Infrastructure	.256	1	99	.614
Political instability	.814	1	98	.369
Inflation	.354	1	97	.553
Exchange rate	1.705	1	90	.195
Street crime	.471	1	97	.494
Organised crime	.248	1	95	.619
Taxes and regulations	.331	1	99	.566
Corruption as a general constraint	.003	1	94	.957
Functioning of the judiciary	.005	1	92	.944
Anticompetitive practices	.666	1	96	.417

Table 7.32 Levene's test of the competition constraints (private)

Test of Homogeneity of Variances

Competition constraint	Levene Statistic	df1	df2	Sig.
Avoid taxes	.542	1	78	.464
No duties	.377	1	89	.541
Foreign price	1.039	1	85	.311
Domestic price	.008	1	94	.927
Violation of patents	.039	1	93	.843
Collude for credit	.121	1	91	.729
Receive subsidies	.710	1	95	.401

Table 7.33 Levene's test of the judicial constraints (private)

Test of Homogeneity of Variances

Judicial constraints	Levene Statistic	df1	df2	Sig.
Fair & impartial	2.313	1	91	.132
Honest	1.062	1	89	.306
Quick	.002	1	89	.968
Affordable	.032	1	83	.858
Consistent	.128	1	86	.722
Enforceability	.194	1	85	.661

Table 7.34 Levene's test of the finance constraints (private)

Test of Homogeneity of Variances

Finance constraints	Levene Statistic	df1	df2	Sig.
Collateral	.221	1	97	.639
Paperwork	4.700	1	98	.033
High interest rates	2.033	1	97	.157
Special connections	.853	1	92	.358
Lack money to lend	.678	1	98	.412
Access to foreign banks	.187	1	68	.667
Access to non bank equity	.276	1	84	.601
Export finance	.221	1	73	.639
Lease finance	.497	1	87	.483
Credit	1.904	1	97	.171
Long term loan	1.325	1	94	.253

Table 7.35 Levene's test of the rules and regulation constraints (private)

Test of Homogeneity of Variances

Rules and regulation constraints	Levene Statistic	df1	df2	Sig.
Business regulations	.008	1	99	.929
Customs regulations	.689	1	74	.409
Labour regulations	.329	1	98	.567
Foreign exchange regulations	2.029	1	80	.158
Environmental regulations	.378	1	94	.540
Fire regulations	.714	1	95	.400
High taxes	1.108	1	92	.295
Tax administration regulations	1.772	1	98	.186

Table 7.36 Levene's test of the corruption constraints (private)

Test of Homogeneity of Variances

Corruption constraints	Levene Statistic	df1	df2	Sig.
Corruption as a general constraint	.003	1	94	.957
Corruption of bank officials	.030	1	91	.863

7.4.1 Financing as a general constraint

Similar to the foreign firms, the private firms also consider financing as the top one constraining factor as a general constraint (table 6.4). In addition, for the private firms, financing is the only one factor that is significant at 95% among the general constraints (table 7.31). The private firms are less constrained by "financing" than the non-private firms, and the variation of private firms is bigger than that of the non-private firms suggesting that the replies of non-private firms when facing the general constraint of "financing" are more various than the private firms (table 7.37.1 and graph 7.24).

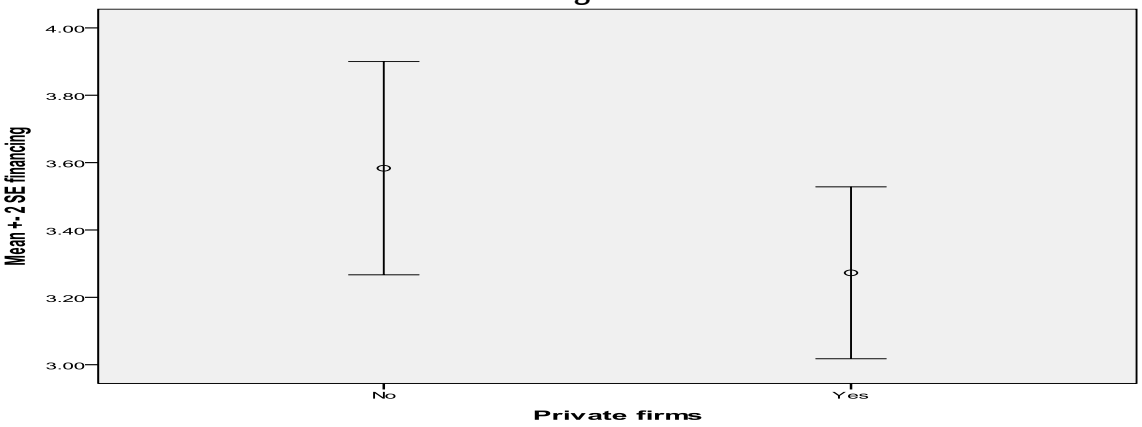
Table 7.37.1 Levene's test of general constraints --- financing

Private ownership		N	Mean	Std. Deviation	Std. Error Mean
Financing	Yes	77	3.2727	1.11964	.12759
	No	24	3.5833	.77553	.15830

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

Financing	Equal variances assumed	7.091	.009	-1.266	99	.209	-.31061	.24542	-.79758	.17637
	Equal variances not assumed			-1.528	55.502	.132	-.31061	.20332	-.71799	.09678

Graph 7.24 The error bar showing the standard error and mean differences---financing



In addition to the private ownership difference, the author examines the other characters of the firms involved in the WBES (table 7.37.2). Among these firms, nearly 2/3 of private firms are without foreign ownership, and almost half is small firms. Recalling the information discussed in the sections of foreign ownership and size categories in Chapter 3, there are obvious difficulties of small firms or related to the foreign ownership factor. As shown in Chapter 3, the domestic private firms face a number of difficulties in accessing financing (Li et al., 2009), and the lending policies of government actually favour the SOEs and against the private firms (Bai et al., 2006). The small firms also face tougher obstacles in obtaining finance (Beck et al., 2005; Schiffer and Weder, 2001; Zhou et al., 2002). Therefore, the factor of small firm size without foreign ownership is the one important factor to explain why financing is significant in the group of private and non-private firms

Table 7.37.2 Frequencies of private firms in the WBES

		Frequency	Percent
Foreign ownership	**Yes**	29	37.7
	No	48	62.3
	Total	77	100.0
Size	**Small**	37	48.1
	Medium	24	31.2
	Large	16	20.8
	Total	77	100.0

7.4.2 Finance constraint: paper work

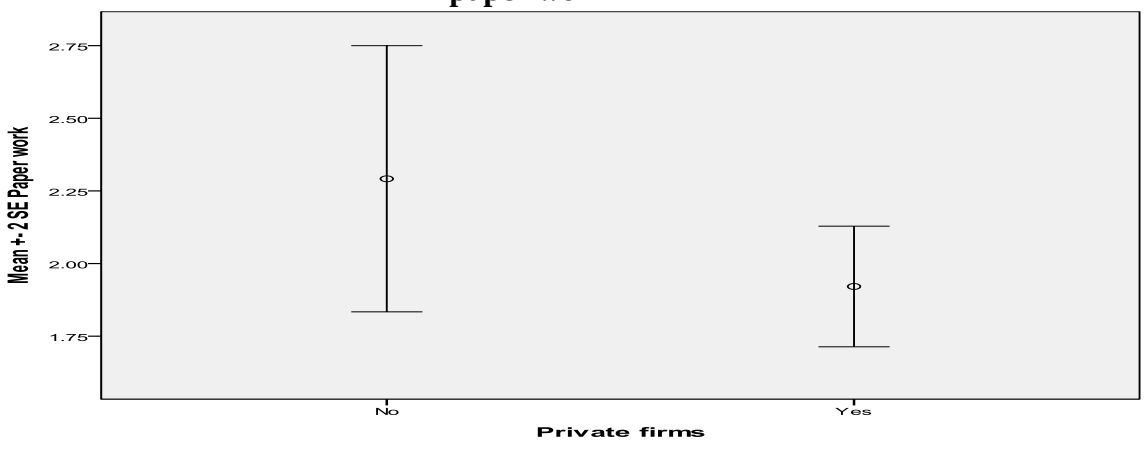
Paper work is another significant financing factor at 95%, and the private firms are less constrained than the non-private firms (table 7.37.3). The responses from the non-private firms are more inconsistent than private firms (graph 7.25). There appears another question that why this significant issue related to the private firms is not significant to the foreign ownership category. The answer is in reforming efforts conducted by the Chinese government (in Chapter 3 and Chapter 4). In other words, the favourite policies for foreign firms in financing are the fundamental issues causing the difference. On the contrary, the constraining factor of paper work is the main disadvantage for private firms in China.

Table 7.37.3 Levene's test of finance constraints --- paper work

	Private ownership	N	Mean	Std. Deviation	Std. Error Mean
Paper work	Yes	76	1.9211	.90573	.10389
	No	24	2.2917	1.12208	.22904

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Paper work	Equal variances assumed	4.700	.033	-1.647	98	.103	-.37061	.22499	-.81710	.07587
	Equal variances not assumed			-1.474	33.010	.150	-.37061	.25151	-.88230	.14107

Graph 7.25 The error bar showing the standard error and mean differences--- paper work



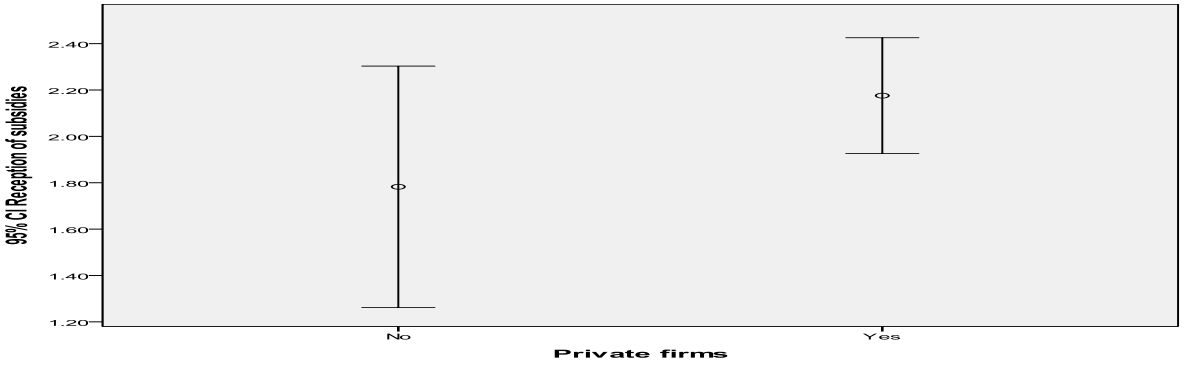
7.4.3 Summery of the category of private and non-private firms

7.4.3.1 Competition constraints

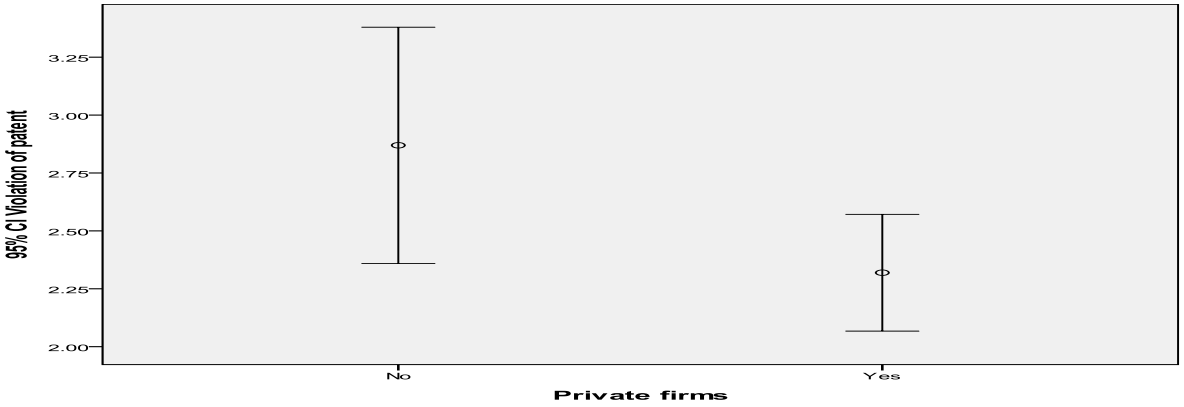
Displayed the graphs (7.25.1, 7.25.2, 7.25.3, 7.25.4, 7.25.5, 7.25.6), private firms are more constrained by "reception of subsidies" and "paying no duties", and are less constrained by "collude for credit", "violation of patent", "foreign price" and "domestic price" (table 7.38.1). As a whole, the author thus the author rejects the hypothesis 1b.

Graph 7.25.1 The error bar showing the standard error and mean differences--- Collude for credit

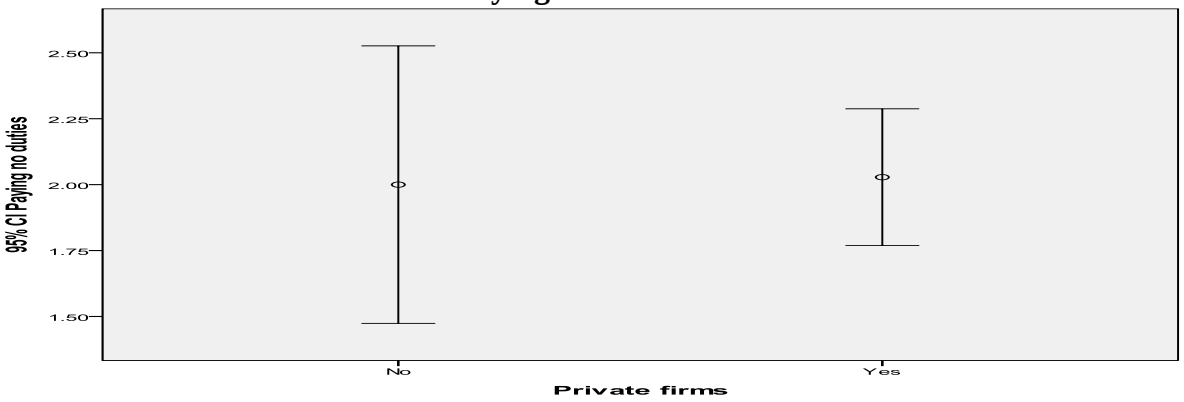
Graph 7.25.2 The error bar showing the standard error and mean differences--- Reception of subsidies



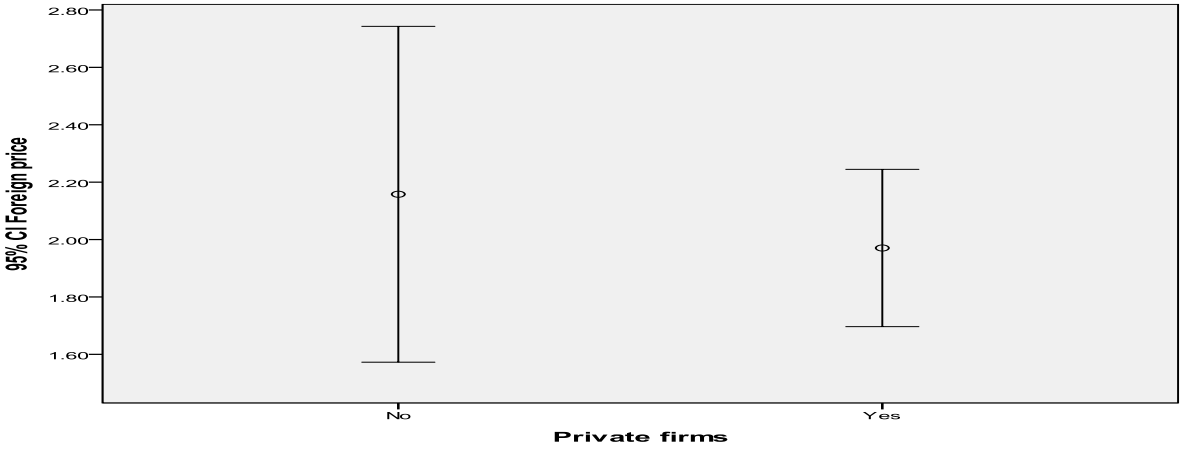
Graph 7.25.3 The error bar showing the standard error and mean differences--- Violation of patent



Graph 7.25.4 The error bar showing the standard error and mean differences--- Paying no duties



Graph 7.25.5 The error bar showing the standard error and mean differences--- Foreign price



Graph 7.25.6 The error bar showing the standard error and mean differences--- Domestic price

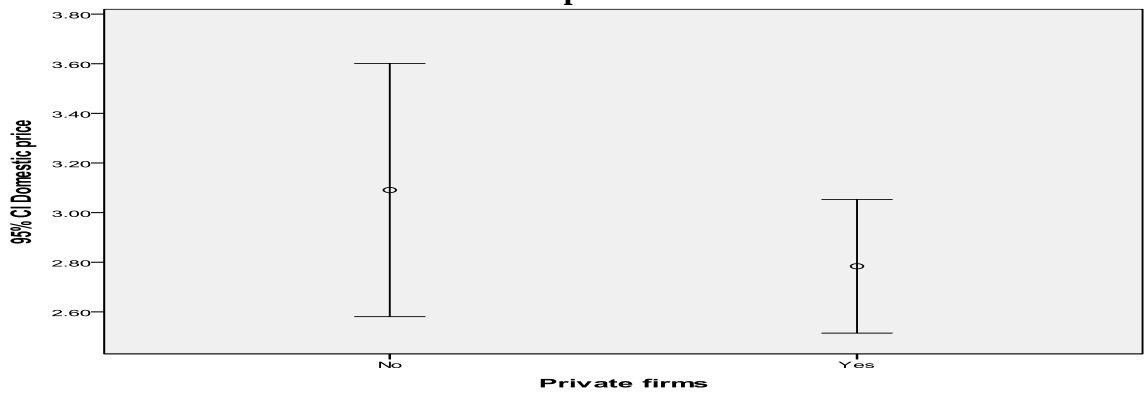


Table 7.38.1 Summery of difference in the competition constraints

Competition constraints	**H1b**: The private firms are more constrained by the constraints of business competition than the non private firms.
Collusion for credit	**Rejected**
Reception of subsidies	**Accepted**
Violation of patent	**Rejected**
Paying no duties	**Accepted**
Foreign prices	**Rejected**
Domestic prices	**Rejected**

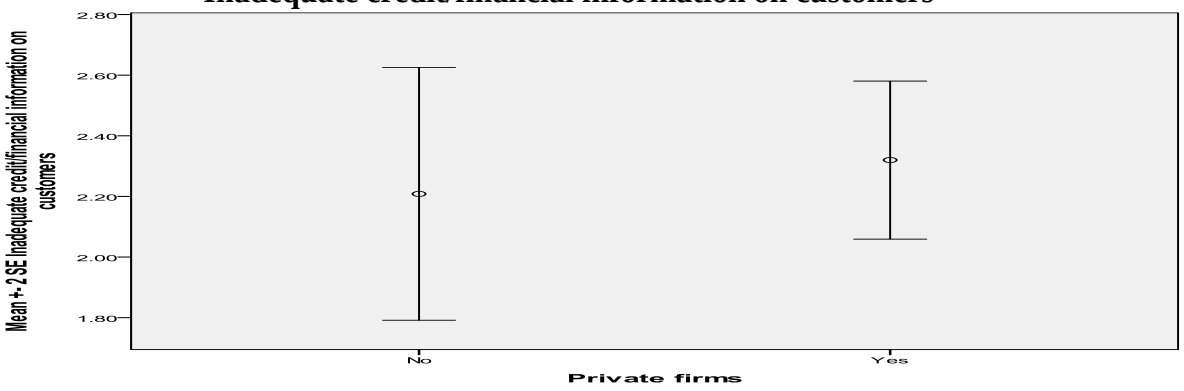
7.4.3.2 Finance constraints

According to the table 7.38.2 and graphs 7.24, 7.25, 7.25.7, 7.25.8 and 7.25.9, similar to the situation when facing the competition constraints, private firms are more constrained by the financial factors of "inadequate credit/financial information on customers" and "access to foreign banks", and are more constrained by the other three financial factors, including "financing" as a general constraint, "high interest rate" and "paper work". Thus, as shown in Table 7.37.3, the hypothesis 2b is rejected overall.

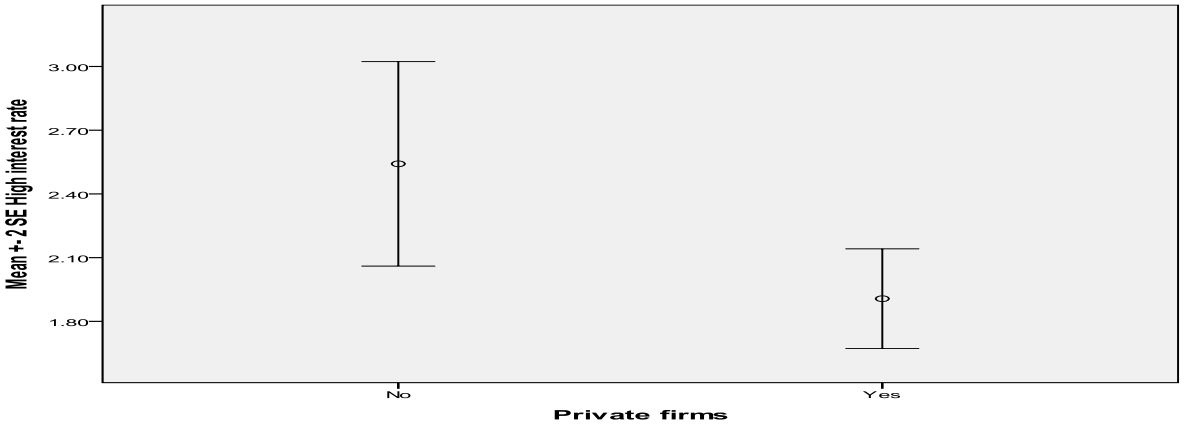
Table 7.38.2 Summery of difference in the finance constraints

Finance constraints	**H2b**: The private firms are more constrained by the constraints of finance than the non private firms.
Finance as a general constraint	**Rejected**
Inadequate credit/financial information on customers	**Accepted**
High interest rate	**Rejected**
Access to foreign banks	**Accepted**
Paper work	**Rejected**

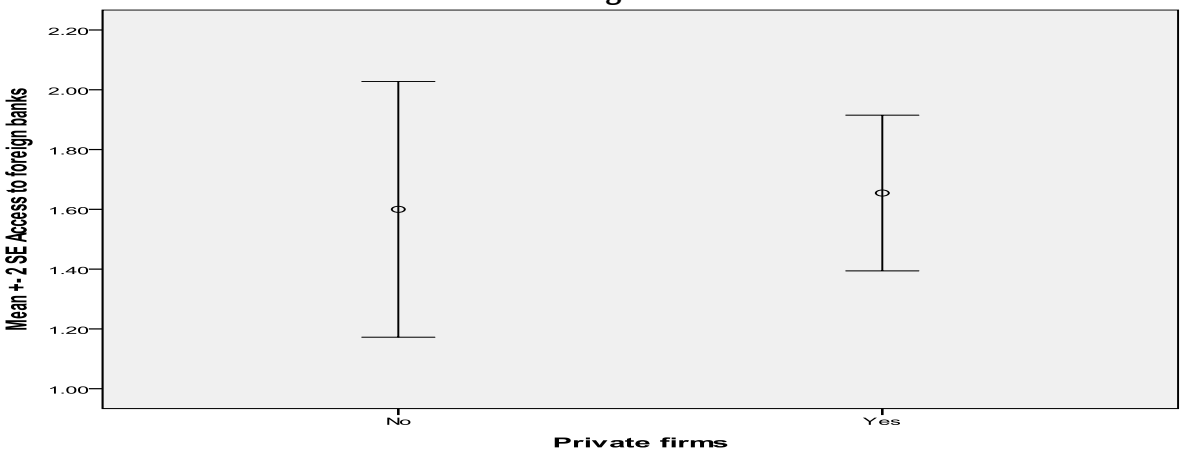
Graph 7.25.7 The error bar showing the standard error and mean differences--- Inadequate credit/financial information on customers



Graph 7.25.8 The error bar showing the standard error and mean differences--- High interest rate



Graph 7.25.9 The error bar showing the standard error and mean differences--- Access to foreign banks



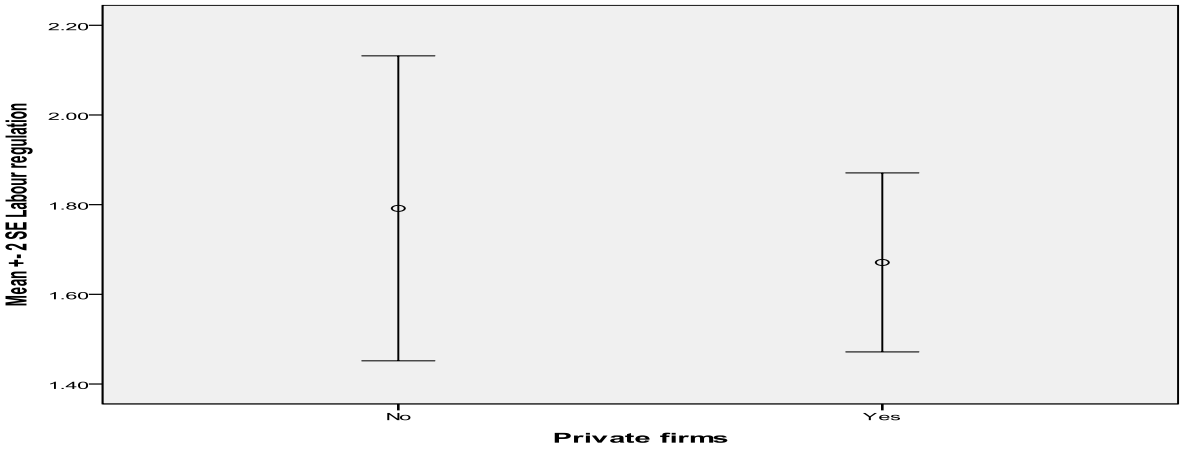
7.4.3.3 The constraints of rules and regulations

According to the graphs (7.25.10, 7.25.11, 7.25.12, 7.25.13 and 7.25.14), private firms are more constrained by "custom regulation", "high tax", and "tax administration regulation". On the contrary, private firms are less constrained by "labour regulation" and "foreign exchange regulation" (table 7.38.3). As a result, the hypothesis 3b is rejected as a whole.

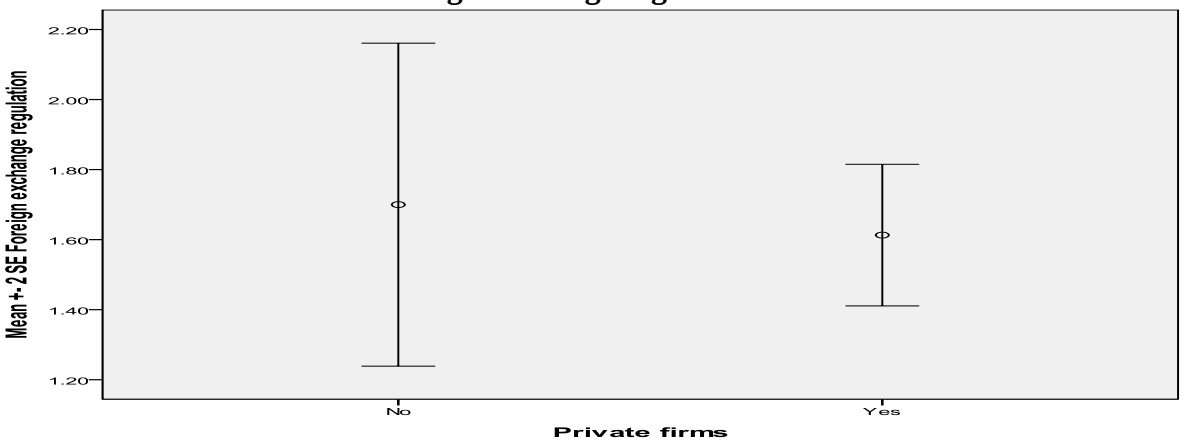
Table 7.38.3 Summery of difference in the rules and regulation constraints

Rules and regulation constraints	**H3b**: The private firms are more constrained by the constraints of bus rules and regulations than non private firms.
Labour regulation	**Rejected**
Foreign exchange regulation	**Rejected**
Custom regulation	**Accepted**
High taxes	**Accepted**
Tax administration regulation	**Accepted**

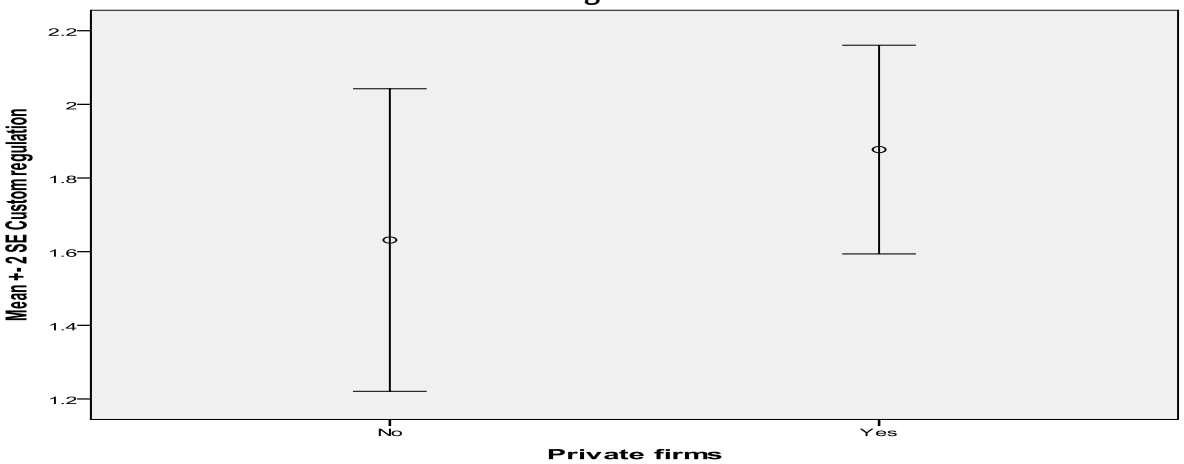
Graph 7.25.10 The error bar showing the standard error and mean differences--- Labour regulation



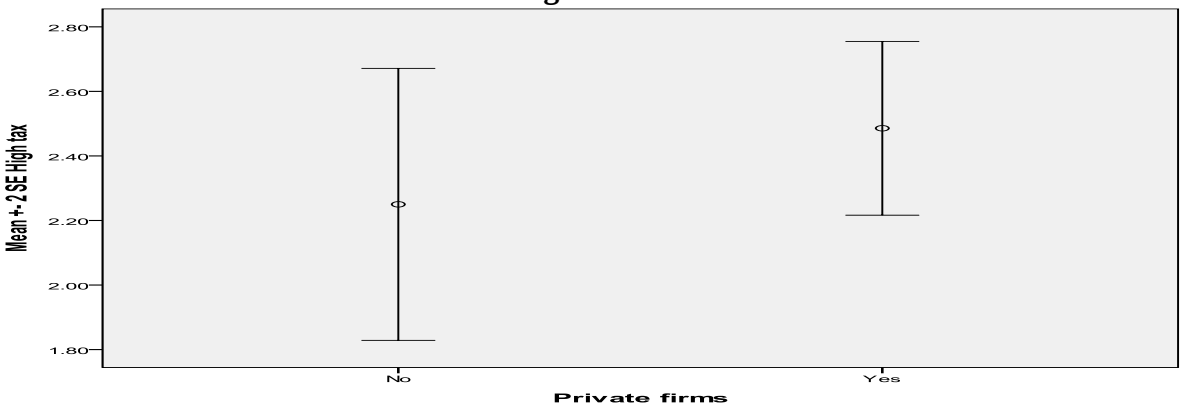
Graph 7.25.11 The error bar showing the standard error and mean differences--- Foreign exchange regulation



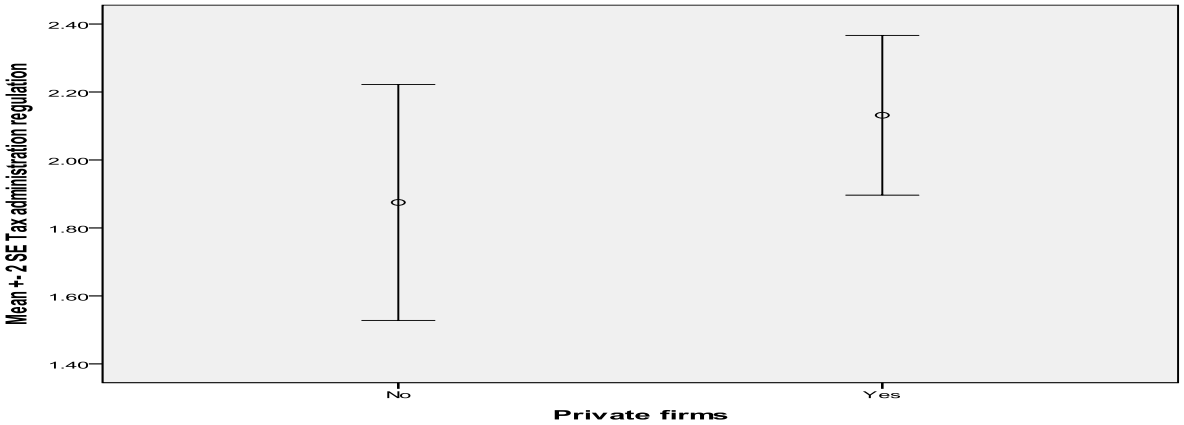
Graph 7.25.12 The error bar showing the standard error and mean differences--- Custom regulation



Graph 7.25.13 The error bar showing the standard error and mean differences--- High tax



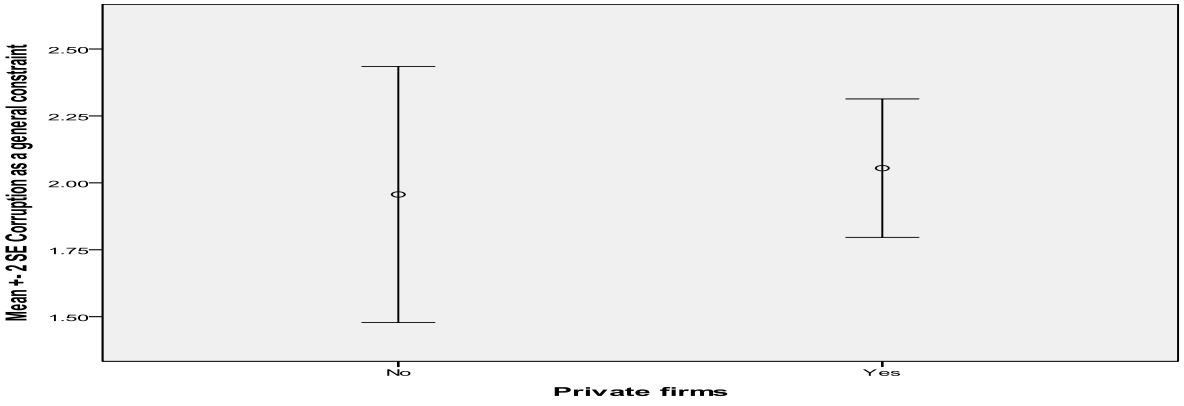
Graph 7.25.14 The error bar showing the standard error and mean differences--- Tax administration regulation



7.4.3.4 The constraints of corruption

Based on two graphs (7.25.15 and 7.25.16), private firms are more constrained by corruption than the non private firms in China (table 7.38.4). Consequently, the hypothesis 4b is accepted.

Graph 7.25.15 The error bar showing the standard error and mean differences--- Corruption as a general constraint



Graph 7.25.16 The error bar showing the standard error and mean differences--- Corruption of bank officials

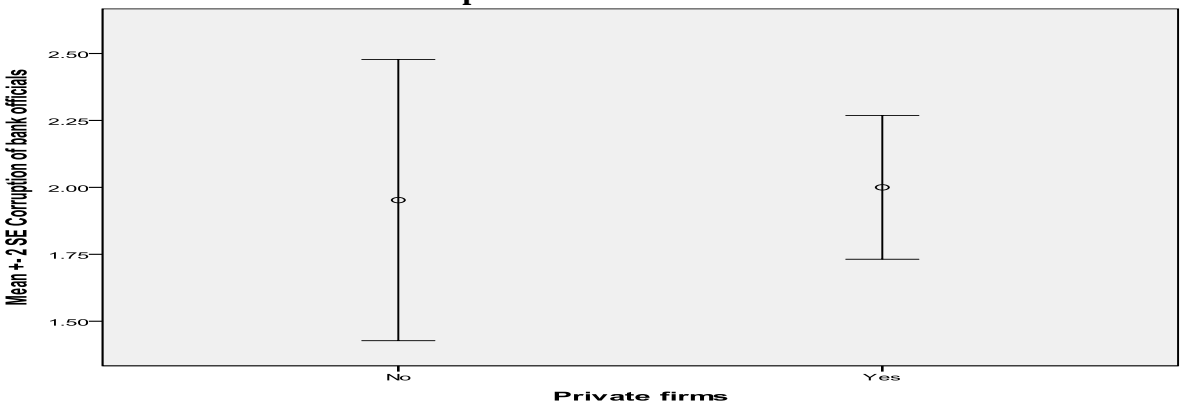


Table 7.38.4 Summery of difference in the corruption constraints

Corruption constraints	**H4b**: The private firms are more constrained by the constraints of corruption than the non private firms.
Corruption as a general constraint	**Accepted**
Corruption of bank officials	**Accepted**

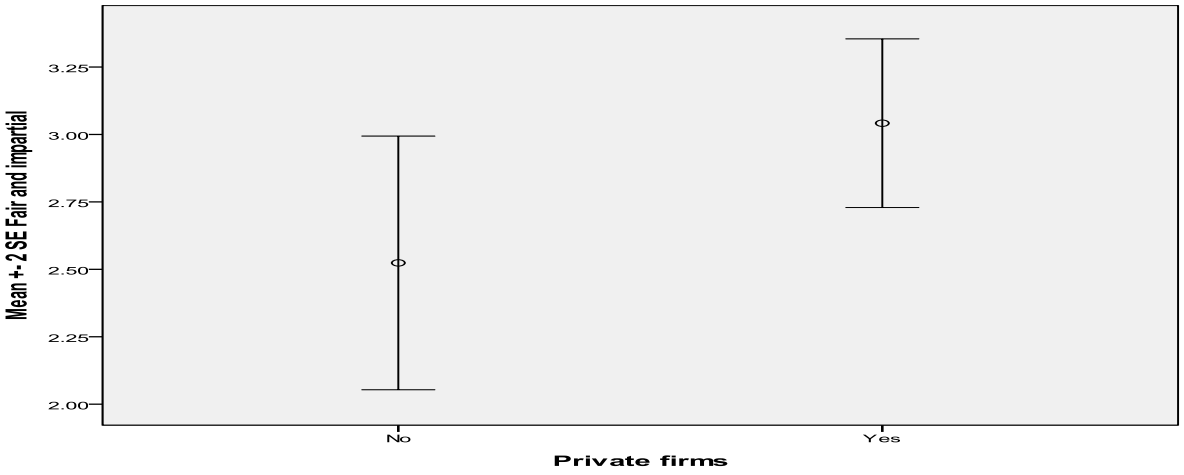
7.4.3.5 The legal constraints

As displayed graphs (7.25.17, 7.25.18, 7.25.19, 7.25.20, 7.25.21, and 7.25.22), the private firms are more constrained than the non-private firms by the judicial constraining factors in China (table 7.38.5). The author therefore accepts Hypothesis 5b.

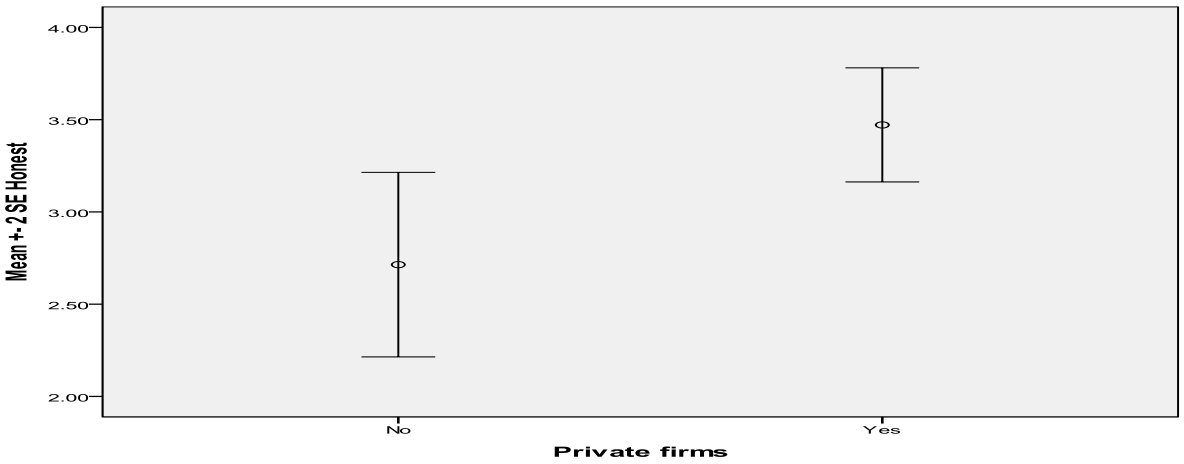
Table 7.38.5 Summery of difference in the judicial constraints

Judicial constraints	**H5b**: The private firms are more constrained by legal constraints than the non private firms.
Fair and impartial	**Accepted**
Honest	**Accepted**
Quick	**Accepted**
Affordable	**Accepted**
Consistent	**Accepted**
Enforceability	**Accepted**

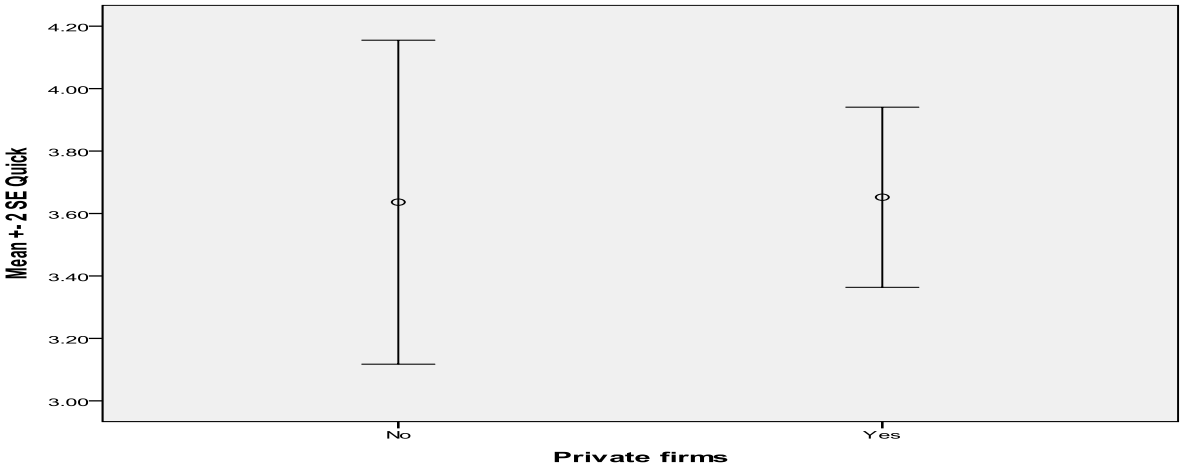
Graph 7.25.17 The error bar showing the standard error and mean differences--- Fair and impartial



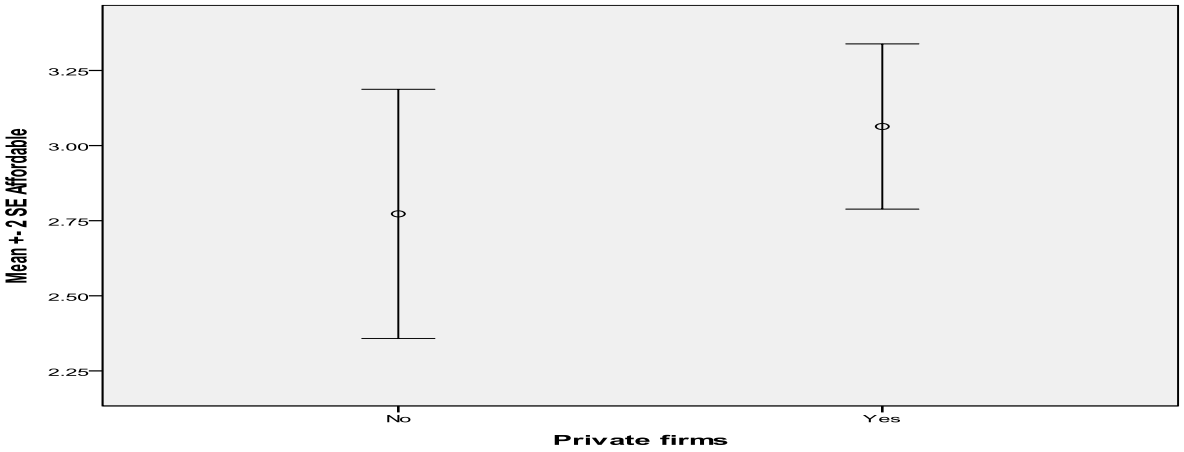
Graph 7.25.18 The error bar showing the standard error and mean differences--- Honest



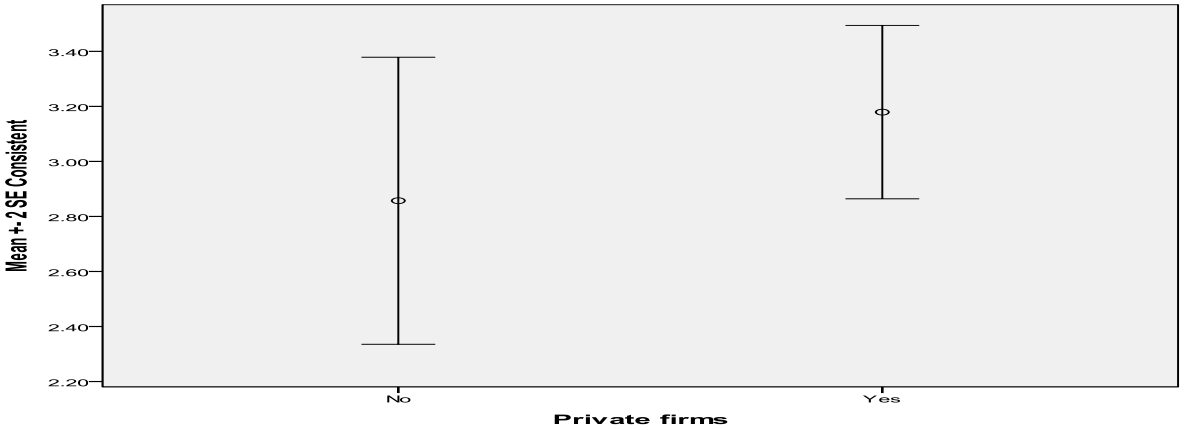
Graph 7.25.19 The error bar showing the standard error and mean differences--- Quick



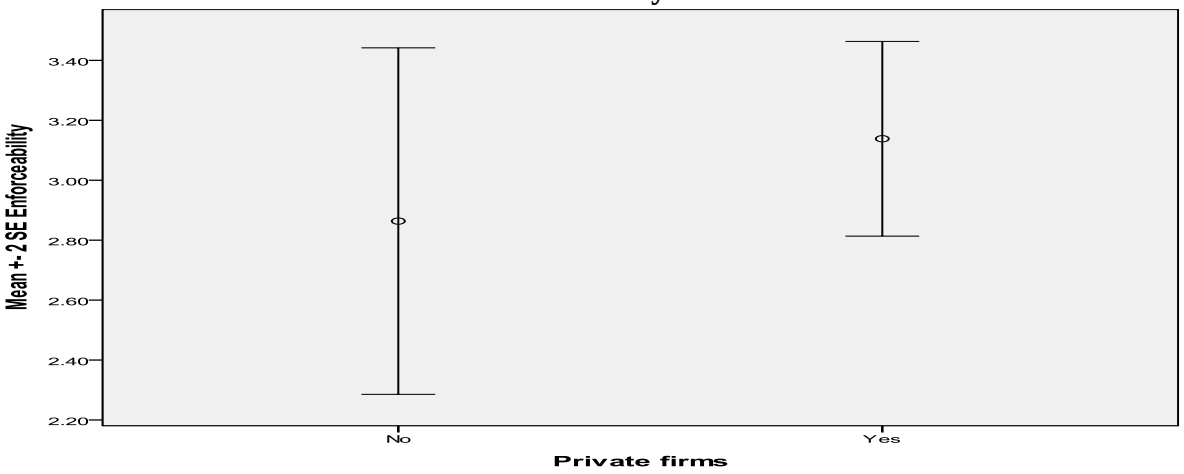
Graph 7.25.20 The error bar showing the standard error and mean differences--- Affordable



Graph 7.25.21 The error bar showing the standard error and mean differences--- Consistent



Graph 7.25.22 The error bar showing the standard error and mean differences--- Enforceability



7.5 Firm group of small, medium and large size

The factor of firm size can influence the firms' business operation, and the difference of firm size can partly determine the way of organisational responses when facing the constraining factors (Beck, et al, 2002; Schiffer and Weder, 2001). In practice, firm size plays an important role on the organisational ability to better access given institutional framework or to avoid the existing business constraints (Bertucci and Alberti, 2003). On one side, a large firm in China that is usually a SOE, have more advantages in facing business constraints as this firm have more power to influence its business environment, including the behaviours of government, the judicial system, the banking system, the operation of law and regulations. On the other side, the small and medium size firms are good at avoiding the control of the Chinese government and its agents within the Communist system, because these firms do not have to depend on supports from banking system and government. This section is to discuss the results of testing hypotheses to explain how the firm size factor responding to the constraints. In other words, it is important to investigate whether the large firms are the least constrained by the institutional obstacles compared to the medium and small firms.

Table 7.39 Levene's test of the general constraints (size)

Test of Homogeneity of Variances

General constraint	Levene Statistic	df1	df2	Sig.
Financing	1.184	2	98	.310
Infrastructure	.980	2	98	.379
Political instability	.736	2	97	.482
Inflation	.384	2	96	.682
Exchange rate	.505	2	89	.605
Street crime	.581	2	96	.561
Organised crime	1.894	2	94	.156
Taxes and regulations	.235	2	98	.791
Corruption as a general constraint	.409	2	93	.666
Functioning of the judiciary	.154	2	91	.858
Anticompetitive practices	2.488	2	95	.088

Table 7.40 Levene's test of the competition constraints (size)

Test of Homogeneity of Variances

Competition constraint	Levene Statistic	df1	df2	Sig.
Avoid taxes	.607	2	77	.547
No duties	3.273	2	88	.043
Foreign price	2.207	2	84	.116
Domestic price	.741	2	93	.479
Violation of patents	1.023	2	92	.364
Collude for credit	3.007	2	90	.054
Receive subsidies	.422	2	94	.657

Table 7.41 Levene's test of the judicial constraints (size)

Test of Homogeneity of Variances

Judicial constraints	Levene Statistic	df1	df2	Sig.
Fair & impartial	.092	2	90	.913
Honest	1.376	2	88	.258
Quick	.229	2	88	.795
Affordable	.999	2	82	.373
Consistent	.705	2	85	.497
Enforceability	.906	2	84	.408

Table 7.42 Levene's test of finance constraints (size)

Test of Homogeneity of Variances

Finance constraints	Levene Statistic	df1	df2	Sig.
Collateral	.026	2	96	.974
Paperwork	.781	2	97	.461
High interest rates	.269	2	96	.765
Special connections	.961	2	91	.387
Lack money to lend	.918	2	97	.403
Access to foreign banks	2.552	2	67	.085
Access to non bank equity	10.773	2	83	.000
Export finance	1.794	2	72	.174
Lease finance	2.155	2	86	.122
Credit	.425	2	96	.655
Long term loan	7.096	2	93	.001

Table 7.43 Levene's test of the rules and regulation constraints (size)

Test of Homogeneity of Variances

Rules and regulation constraints	Levene Statistic	df1	df2	Sig.
Business regulations	.598	2	98	.552
Customs regulations	1.423	2	73	.248
Labour regulations	.612	2	97	.545
Foreign exchange regulations	.151	2	79	.860
Environmental regulations	.355	2	93	.702
Fire regulations	.653	2	94	.523
High taxes	.930	2	91	.398
Tax administration regulations	.584	2	97	.559

Table 7.44 Levene's test of the corruption constraints (size)

Test of Homogeneity of Variances

Corruption constraints	Levene Statistic	df1	df2	Sig.
Corruption as a general constraint	.409	2	93	.666
Corruption of bank officials	1.577	2	90	.212

According to the general constraints in the WBES, no difference is significant at 95% level. Among the competition constraints, the constraining factor "no duties" is the only significant one. The financing constraints of "access to non-bank equity" and "long term loan" are both significant. In the category of rules and regulations, the corruption constraints and judicial constraints, the author again fails to find any significance caused by the firm size factor. There are five different trends:

- Some constraints are positively related to the size factor. In other words, the bigger the firms are, the larger the constraints are. The constraints belonging to this trend include "no duties" (graph 7.26), "foreign price", "access to foreign bank", and "lease finance". The table 7.45 can partly explain that. More than 80% of small firms are private firms, and they can largely use all approaches to get the right to live in the competition without considering anything else too much, even if the ways are legal or illegal.
- Some constraints are negatively related to the firms' size. That is, the smaller the firms are, the larger the severity of these constraints. Small firms suffer more than medium-sized firms, which in turn suffer more than large firms do because the small firms have fewer opportunities to exploit their informal arrangements in order to overcome some constraints. This put the small firms in a less advantageous position than the medium and the large firms with regard to these constraints. This pattern is more obvious if the medium and large size firms can use their connections and receive some business advantages because they are closer to the administration or government officials, such as when facing the constraint of "customs regulations". As a result, medium and large firms are less constrained by these factors. Summarised in table 7.47, more than half of large size firms in the WBES are private firms and domestic firms, and they cannot receive the same business advantages as the foreign firms and the non private firms (SOEs). The large firms appear to be the least constrained because their contributions in tax revenue and employment can influence the rules of the game in China.
- The medium firms are the most constrained. Table 7.46 summarises most of the medium size firms in the WBES are the private firms without foreign ownership, and they do not have advantage like foreign firms and non private firms (SOEs). These firms are also not

enough small to reduce the severity of the constraints or to avoid the regulations and administration either. In addition, the medium size firms are not enough big to influence the operation of regulations and government intervenes. Consequently, the medium size firms have to deal with the formal sector and face any related constraints more than the other two size categories.

- The medium firms are the least constrained, including "collude for credit", "court-honest", "corruption of bank officials", "access to non bank equity" (graph 7.27), and "export finance".
- The last trend is the large size firms are the most constrained, while both small and medium size firms are less constrained, such as the finance constraint named the long term loan (graph 7.28).

Graph 7.26 The error bar showing the standard error and mean differences---No duties

Graph 7.27 The error bar showing the standard error and mean differences---Access to non bank equity

Graph 7.28 The error bar showing the standard error and mean differences---Long term loans

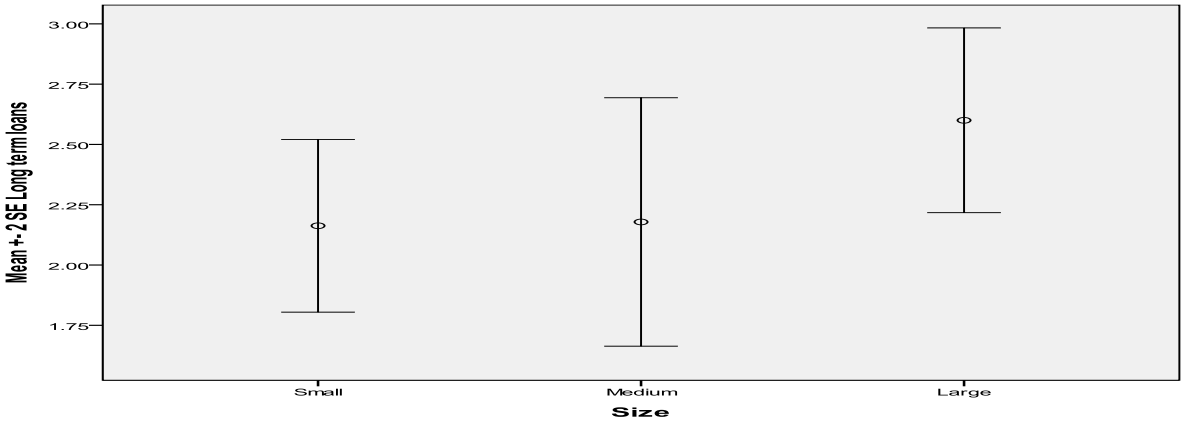


Table 7.45 Frequencies of the small size firms

		Frequency	Percent
Foreign ownership	Yes	14	31.1
	No	31	68.9
	Total	45	100.0
Private ownership	No	8	17.8
	Yes	37	82.2
	Total	45	100.0

Table 7.46 Frequencies of the medium size firms

		Frequency	Percent
Foreign ownership	Yes	10	33.3
	No	20	66.7
	Total	30	100.0
Private ownership	No	6	20.0
	Yes	24	80.0
	Total	30	100.0

Table 7.47 Frequencies of the big size firms

		Frequency	Percent
Foreign ownership	Yes	11	42.3
	No	15	57.7
	Total	26	100.0
Private ownership	No	10	38.5
	Yes	16	61.5
	Total	26	100.0

Based on the five trends about the relations between firm size factor and the business constraints, the hypothesis 6a and hypothesis 6b is rejected (table 7.48).

Table 7.48 Summary of the firm size factor

H6a: The business constraints faced by the firms are positively related to the factor of firm size. That is, large firms face fewer problems in terms of formal institutional constraints than medium firms that in turn have fewer problems than small firms have.	Rejected
H6b: The business constraints faced by the firms are negatively related to the factor of firm size. That is, large firms face fewer problems in terms of informal institutional constraints than medium firms that in turn have fewer problems than small firms have.	Rejected

7.6 Summary and discussion of chapter

This chapter tested the insider-outsider hypotheses in the firm categories related to foreign ownership and private ownership. The author also examines the hypotheses related to the factor of firm size. The different group of firms exhibit discrepancies according to their perceptions of business constraints. Evidently, this chapter confirms that the different categories are distinct from one another under both formal and informal institutional constraints. This distinction also confirms that the firms differ in their business operation due to the nature of the firms themselves and the nature of the business environment in China. This confirms the opinion that some firms can be categorised as insiders and outsiders in the Chinese business environment, and the constraints on the insiders and outsiders are also dissimilar.

Three factors are significant because of foreign ownership, including “financing” as a general constraint, “access to foreign bank” in finance constraints, and “enforceability” in judicial constraints. Connected with private ownership, only “financing” as a general constraint and “paper work” in finance constraints are significant at 95%. Related to the firm size factor, three different factors are significant at 95%, named “no duties” in competition constraints, “access to non bank equity” and “long-term loan” in finances constraints. One implication is that, under the categories of foreign ownership and private ownership, the firms are both 95% significantly different when facing “financing” as a general constraint. Base on table 7.37.2, the author believes the reason is the character of private firms as the large proportion of private firms in China is also in the small firm category without foreign ownership.

Moreover, this chapter discusses why the foreign firms are less constrained than domestic firms and why they display high heterogeneity in their group. The determinant is the nature of those firms, i.e. the worldwide network and overseas financial abilities of the foreign firms that help them ease some financial constraints. This chapter also highlights the importance of special

treatment towards the foreign firms to operate their business in China. Moreover, this chapter shows that the firms with different sizes have different response to the constraining factors, and the size factor can play an important role in determining the business performance. However, table 7.45, table 7.46 and table 7.47 display the nature behind the firm size factor are complicated. The findings related to this chapter only include the hypotheses related to the size of the firms, the private ownership, and the foreign ownership. It is still possible that there are a number of other factors that are able to have an effect.

The investigation of hypothesise is displayed in table 7.49. Moreover, the constraints for the different types of ownership and firm size would also be connected with both the formal and informal institutions to affect the firms' business performance. Based on the constraining factors that are statistically significant at 95% upon Levene's test, the author is to explore how the institutional factors the business performance in Chapter 8.

Table 7.49 Hypothesis investigation

H1a	The foreign firms are less constrained by the constraints of business competition than the domestic firms.	**Rejected**
H1b	The private firms are more constrained by the constraints of business competition than the non private firms.	**Rejected**
H2a	The foreign firms are less constrained by the constraints of finance than the domestic firms.	**Rejected**
H2b	The private firms are more constrained by the constraints of finance than the non private firms.	**Rejected**
H3a	The foreign firms are less constrained by the constraints of business rules and regulations than the domestic firms.	**Rejected**
H3b	The private firms are more constrained by the constraints of business rules and regulations than the non private firms.	**Rejected**
H4a	The foreign firms are more constrained by the constraints of corruption than the domestic firms.	**Rejected**
H4b	The private firms are more constrained by the constraints of corruption than the non private firms.	**Accepted**
H5a	The foreign firms are less constrained by legal constraints than the domestic firms.	**Rejected**
H5b	The private firms are more constrained by legal constraints than the non private firms.	**Accepted**
H6a	The business constraints faced by the firms are positively related to the factor of firm size. That is, large firms face fewer problems in terms of formal institutional constraints than medium firms that in turn have fewer problems than small firms have.	**Rejected**
H6b	The business constraints faced by the firms are negatively related to the factor of firm size. That is, large firms face fewer problems in terms of informal institutional constraints than medium firms that in turn have fewer problems than small firms have.	**Rejected**

Chapter 8 Research finding: Using regression analysis to explore business performance in China

8.1 Introduction

This chapter intends to test the constraining factors in regards to the different perceptions of the WBES in relation to the business constraints from the viewpoint of foreign and domestic firms, and private and non-private firms. The categories overlap each other and consequently the results associated with each classification could be affected by the characteristics of the remaining categories. This is common across many studies when testing differences between different categories (Hellman, et al, 2000; Batra, et al, 2003). It is difficult to construct pure homogenous groups and compare between them. This research conceptual framework postulates the existence of institutional factors that forms the institutional constraints in the business environment of China.

This chapter studies the effects of the constraining factors on the business performance, to provide an assessment whereby the firms' performance is constrained by the institutions. The model might consist of the informal constraints (Angeletos and Kollintzas, 2000; Clark and Xu, 2002; Hellman et al., 2000; Johnson and Mitton, 2003; Wei, 1997). Also, the model can include research variables that are associated with formal institutions (Beck and Levine, 2003; Mauro, 1995). Beck et al., (2000) note that the underdeveloped financial and legal systems constrain the firms' ability to fund investment projects and weakens business performance. They also argue that quality of financial and legal systems is strongly related to the local business circumstances. Based on the findings in Chapter 7, the author considers that the quality of financial system and legal systems are closely connected with the level of business constraints. This connection implies that these institutions are contingent on the level and the quality of the factors that constrain the business operation. This chapter endeavours to explore these questions about how the institutions influence the business performance, to demonstrate an approach of the institutional changes to improve business performance (Mantzavinos, et al, 2004).

8.1.1 Regression model and statistical technique

The statistical tools used are logistic regression and categorical regression, which involve categorical variables with different level of scale, such as nominal data, ordinal data, and numerical data. Categorical variables serve to separate groups of cases, and the technique estimates separate sets of parameters for each group. In particular, this technique is not

dependent on the assumption of normality of the variables. Logistic regression and categorical regression are therefore appropriate for the assessment of the variables in this study, which are categorised on different scales (ordinal scale for dependent variable, size and institutional constraints, ordinal scale for sector, and numeric scale for age of the firms). Running regressions requires usually testing for multicollinearity, which is a common problem in regression procedures. This problem can generate erroneous coefficient estimates and hence leads to misleading conclusions about the potential effect of the independent variables on the dependent variable. A common method to identify the potential presence of this problem is to run a correlation matrix amongst the independent variables in the equations to see whether there is high and significant correlation between the independent variables. It is therefore important to run a correlation matrix between the independent variables in the analysis.

8.1.2 Research data and variables

In Chapter 5, the author has already compared a number of available data sources and found that the WBES is appropriate for this research. Additionally, after discussing the advantages and shortcomings of research variables, the author has demonstrated that the sales and investment of the firms in China is more convinced than that of profit in this study. Based on the conceptual framework in Chapter 3, the author represents two models to measure the business performance affected by institutional constraints, in terms of sales and investment changes over the previous three years as well as their expected changes over the next three years. Moreover, as discussed in Chapter 5, to investigate the effect of institutions on business performance, the dependent variables are the business performance of the firms, in terms of sales and investment, and the independent variables include the industrial sector of the firm, firm size, firm age, and the institutional constraints. The equations are:

Performance (previous sales growth) $=\alpha+\beta 1\text{sector}+\beta 2\text{size}+\beta 3\text{age}+\beta 4$ institutional variables$+\varepsilon$

Performance (previous investment growth) $=\alpha+\beta'1\text{sector}+\beta'2\text{size}+\beta'3\text{age}+\beta'4$institutional variables $+\varepsilon$

Future Performance (sale growth) $=\alpha+\lambda 1\text{sector}+\lambda 2\text{size}+\lambda 3\text{age}+\lambda 4$ institutional variables $+\varepsilon$

Future Performance (investment growth) $=\alpha+\lambda'1\text{sector}+\lambda'2\text{size}+\lambda'3\text{age}+\lambda'4$ institutional variables $+\varepsilon$

There are different firm groups displayed in Chapter 3. The author has chosen the domestic firms (firms without foreign ownership) and the foreign firms (FIEs) to investigate the business constraints on the FDI inflows. Moreover, the author will examine the difference in business performance of private firms (firms without government ownership) and non private firms

(firms having government ownership), to determine the influences caused by the institutional constraints, especially on domestic private business in China. Both the formal institutional and informal constraints are considered, which consists of financing, legal system, business competition, rules and regulations, and corruption.

In the group of foreign firms and domestic firms, at the level of 95%, **financing** is the only one significant variable as general constraints (table 7.1). Among those specific business constraints, there are two significant institutional constraints based on the WBES (table 7.2, table 7.3, table 7.4, table 7.5 and table 7.6). One variable under the name of "**finance-access to foreign bank**" is selected. It is also judged on four-point scale; no obstacle, minor obstacle, moderate, and major obstacle. The second variable is under Chinese legal system, named "**courts-enforceablility**". **In the group of private firms and non-private firms**, at the 95% level, **financing** is again the only one significant variable as a general constraint. Among the specific business constraints, **finance-paper work** is the only one significant at 95%. Previous sales and investment change as well as future sales and future investment are reported in the WBES, in the context of nominal scale as the dependent variables. Sector, size and age variables are chosen as control variables because of their potential role in determining the performance of firms (Hellman et al., 2002; Batra et al., 2003). The investigation in Chapter 7 has presented the constraints of **the informal institutions do not significantly influence the business performances** at 95%, in the group of foreign / domestic firm, in the group of private / non-private firm, and in the firm group of different sizes.

8.2 Influences of the institutional constraints on the business performance in China

8.2.1 The group of foreign firms and domestic firms

8.2.1.1 General constraints

Having been displayed in Chapter 7, according to the foreign firms and domestic firms, **among the general constraints, finance is the unique one that is significantly at 95% related to the foreign ownership factor** (table 7.1). In addition, **finance also significantly influence the category of private firms and non-private firms** (table 7.31). However, no general constraints significantly influence the business performance related to the firm size factor (table 7.39). The following equations are estimated:

Previous sales $=\alpha+\beta 1\text{sector}+\beta 2\text{size}+\beta 3\text{age}+\beta 4\ \text{finance}+\varepsilon$

Future sales =α+λ1sector+λ2size+λ3age +λ4 finance +ε

Previous investment =α+β'1sector+β'2size+β'3age +β'4 finance +ε

Future investment =α+λ' 1sector+λ' 2size+λ' 3age +λ' 4 finance +ε

The results of logistic regression of sales and investment changes are shown in Table 8.1, Table 8.2, Table 8.3 and Table 8.4 (sales or investment change=1, no change of sales or investment=2). As a one-tail test, in the previous three years, only the factor of firm age is positively significant to influence the change of sales, and the constraining factors are insignificant to influence the change of investment and of sales. Table 8.1 shows that in the previous three years, the model is statistically significant as the p-value of step 1 is 0.032 that is less than 5%, and the overall percentages of correct prediction by the model is 85.9%. In table 8.3, the overall percent of investment change in the previous three years that are correctly predicted by the model is 55.4%, and the model is not significant as the p-value that is 0.445 which is more than 5%. According to table 8.2 and table 8.4, in the future three years, all factors are insignificant to influence the change of investment and of sales, while only firm age is positively significant to affect the change to investment. In addition, the overall percentage of prediction by logistics regression is 90.9% for sales, and the model is not statistically significant as p-value that is 0.561 which is more than 5%. The overall percentage of prediction of investment change is 68.5%, and the model is not statically significant as p-value 14.4% which is less more than 5%.

Table 8.1: Effect on sales change of the previous three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	10.563	4	.032
	Block	10.563	4	.032
	Model	10.563	4	.032

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	71.258[a]	.108	.184

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Classification Table[a]

Observed	Predicted	
	VAR00014	Percentage

			1.00	2.00	Correct
Step 1	Sales	1.00	76	1	98.7
		2.00	12	3	20.0
	Overall Percentage				85.9

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	-.094	.348	.073	1	.787	.910
	Size	.144	.441	.106	1	.744	1.155
	Age	.050	.020	6.117	1	.013	1.052
	Finance	-.354	.294	1.448	1	.229	.702
	Constant	-1.320	1.726	.585	1	.444	.267

a. Variable(s) entered on step 1: **Sector**, **Size**, **Age**, **Finance**.

Table 8.2: Effect on sales change of the future three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	2.983	4	.561
	Block	2.983	4	.561
	Model	2.983	4	.561

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	50.633[a]	.033	.073

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Classification Table[a]

	Observed		Predicted		
			VAR00015		Percentage Correct
			1.00	2.00	
Step 1	Sales	1.00	80	0	100.0
		2.00	8	0	.0
	Overall Percentage				90.9

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	.011	.433	.001	1	.980	1.011

	Size	-.160	.532	.090	1	.764	.852
	Age	-.042	.051	.666	1	.414	.959
	Finance	-.361	.326	1.222	1	.269	.697
	Constant	-.530	1.903	.077	1	.781	.589

a. Variable(s) entered on step 1: **Sector**, **Size**, **Age**, **Finance**.

Table 8.3: Effect on investment change of the previous three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3.724	4	.445
	Block	3.724	4	.445
	Model	3.724	4	.445

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	123.642[a]	.040	.053

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Classification Table[a]

	Observed		Predicted		
			VAR00016		Percentage
			1.00	2.00	Correct
Step 1	Investment	1.00	21	23	47.7
		2.00	18	30	62.5
	Overall Percentage				55.4

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	.211	.246	.730	1	.393	1.234
	Size	.172	.310	.306	1	.580	1.187
	Age	.021	.018	1.371	1	.242	1.022
	Finance	.133	.221	.363	1	.547	1.142
	Constant	-1.370	1.264	1.174	1	.279	.254

a. Variable(s) entered on step 1: **Sector**, **Size**, **Age**, **Finance**.

Table 8.4: Effect on investment change of the future three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	6.859	4	.144
	Block	6.859	4	.144
	Model	6.859	4	.144

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	115.158[a]	.074	.099

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00017		Percentage Correct
			1.00	2.00	
Step 1	Investment	1.00	43	7	86.0
		2.00	21	18	46.2
	Overall Percentage				68.5

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	.197	.254	.597	1	.440	1.217
	Size	-.482	.321	2.259	1	.133	.617
	Age	.041	.019	4.565	1	.033	1.042
	Finance	-.188	.224	.704	1	.401	.828
	Constant	.364	1.259	.084	1	.772	1.439

a. Variable(s) entered on step 1: **Sector**, **Size**, **Age**, **Finance**.

All the independent variables are same in the equation of categorical regression, and the dependent variables change to the growth of the sales and the investment. Shown in table 8.5, table 8.6, table 8.7, and table 8.8, size and finance are both negatively significant to influence the sale growth in the previous three years, and sector is significant to influence the sales growth in the future three years. However, finance is not significant to influence the sale growth in the future three years. Moreover, no factors are significant to influence the investment in the

previous years or in the future three years, and sector is again significant to have an effect on investment in the future three years.

Table 8.5: Effect on sales growth of the previous three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.179	.116	2.356	.104
Size	-.326	.140	5.382	.007
Age	.285	.262	1.183	.281
Finance	-.405	.149	7.392	.001

R square: .229

Table 8.6: Effect on sales growth of the future three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.259	.123	4.427	.016
Size	-.203	.214	.902	.346
Age	-.193	.229	.710	.403
Finance	.155	.187	.688	.506

R square: .127

Table 8.7: Effect on investment growth of the previous three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.252	.143	3.119	.058
Size	-.223	.191	1.373	.250
Age	-.149	.383	.151	.700
Finance	-.224	.193	1.343	.275

R square: .222

Table 8.8: Effect on investment growth of the future three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.464	.179	6.696	.004

Size	-.198	.254	.608	.442
Age	-.287	.295	.951	.337
Finance	.207	.294	.497	.487

R square: .400

8.2.1.2 Specific constraints

Investigated in Chapter 7, among the specific constraints in the WBES, there are only two variables that are named "court-enforceability" and "finance-access to foreign bank", are significantly related to the foreign ownership factor which affects business performance. The following correlation matrix of the two equations above displays the following results. Table 8.9 shows that the independent variables, do not correlate highly or significantly with each other at 95%. It would be primarily safe to run the regressions, as there is no general problem of multicollinearity. The following equations are estimated:

Previous sales $=\alpha+\beta 1\text{sector}+\beta 2\text{size}+\beta 3$ Age $+\beta 4$ enforceability $+\beta 5$ access to foreign bank $+\varepsilon$

Future sales $=\alpha+\lambda 1\text{sector}+\lambda 2\text{size}+\lambda 3$ Age $+\lambda 4$ enforceability $+\lambda 5$ access to foreign bank $+\varepsilon$

Previous investment $=\alpha+\beta'1\text{sector}+\beta'2\text{size}+\beta'3$ Age $+\beta'4$ enforceability $+\beta'5$ access to foreign bank $+\varepsilon$

Future investment $=\alpha+\lambda'$ 1sector$+\lambda'$ 2size$+\lambda'$ 3 Age $+\lambda'$ 4 enforceability $+\lambda'5$ access to foreign bank $+\varepsilon$

Table 8.9: Correlation Matrix between the independent variables for foreign ownership

Correlations

		Enforceability	Access to foreign banks
Enforceability	Pearson Correlation	1	.004
	Sig. (2-tailed)		.977
Access to foreign banks	Pearson Correlation	.004	1
	Sig. (2-tailed)	.977	

The results of logistic regression analysis are shown in the table 8.10, table 8.11, table 8.12 and table 8.13 (sales/investment change=1, no change of sale/investment=2). They are still one-tail tests. In the previous three years, firm age is again positively significant to influence the change of sales at 95%, and no constraining factor is significant to influence either the change of sales or of investment. In the previous three years, the overall percent of logistic regression prediction is 84.5% for sales change, and the model is not statistically significant as p-value (0.22) is more than 5%. In the same period, the overall percentage of model in correct prediction is 60.3% for investment changes, and the model is not significant as p-value (.635) is more than 5%. In the future three years, "enforceability" is negatively significant affecting the change of sales at 95%.

The model to predict the sale change in the future three years is not significant as p-value (.142) is more than 5%. For the future investment, the model is not significant as p-value (.177) is more than 5%. In the prediction of future investment, the factor of firm size has significantly negative effects, and the factor of "finance-access to foreign bank" has significantly positive influence at 95%. Moreover, the overall percentages of logistics regression are 92.7% for sales and 68.5% for investment respectively.

Table 8.10: Effect on sales change of the previous three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	7.010	5	.220
	Block	7.010	5	.220
	Model	7.010	5	.220

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	46.315[a]	.114	.189

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00014		Percentage Correct
			1.00	2.00	
Step 1	Sales	1.00	47	1	97.9
		2.00	8	2	20.0
	Overall Percentage				84.5

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	-.100	.438	.052	1	.820	.905
	Size	.243	.546	.198	1	.657	1.275
	Age	.044	.025	3.181	1	.075	1.045
	Enforceability	-.309	.309	1.000	1	.317	.734
	Access to foreign bank	.190	.411	.215	1	.643	1.210
	Constant	-1.935	1.931	1.003	1	.317	.144

a. Variable(s) entered on step 1: **Sector, Size, Age, Enforceability, Access to foreign bank.**

Table 8.11: Effect on sales change of the future three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	8.263	5	.142
	Block	8.263	5	.142
	Model	8.263	5	.142

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	20.407[a]	.139	.343

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00015		Percentage Correct
			1.00	2.00	
Step 1	Sales	1.00	51	0	100.0
		2.00	4	0	.0
	Overall Percentage				92.7

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	-.372	.720	.266	1	.606	.689
	Size	-.324	.738	.193	1	.660	.723
	Age	-.040	.080	.253	1	.615	.961
	Enforceability	-1.740	.911	3.650	1	.056	.175
	Access to foreign bank	-.573	.965	.352	1	.553	.564
	Constant	3.774	3.681	1.051	1	.305	43.556

a. Variable(s) entered on step 1: **Sector, Size, Age, Enforceability, Access to foreign bank.**

Table 8.12: Effect on investment change of the previous three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3.423	5	.635
	Block	3.423	5	.635
	Model	3.423	5	.635

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	76.982[a]	.057	.076

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00016		Percentage Correct
			1.00	2.00	
Step 1	Investment	1.00	21	8	72.4
		2.00	15	14	48.3
	Overall Percentage				60.3

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	.076	.313	.059	1	.808	1.079
	Size	-.030	.393	.006	1	.939	.970
	Age	.038	.026	2.153	1	.142	1.038
	Enforceability	.102	.204	.248	1	.618	1.107
	Access to foreign bank	.137	.319	.186	1	.667	1.147
	Constant	-1.054	1.339	.620	1	.431	.348

a. Variable(s) entered on step 1: **Sector, Size, Age, Enforceability, Access to foreign bank**.

Table 8.13: Effect on investment change of the future three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	7.646	5	.177
	Block	7.646	5	.177
	Model	7.646	5	.177

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	69.701[a]	.128	.170

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00017		Percentage Correct
			1.00	2.00	
Step 1	Investment	1.00	20	10	66.7
		2.00	12	14	53.8
	Overall Percentage				60.7

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	-.007	.330	.000	1	.982	.993
	Size	-.743	.425	3.057	1	.080	.476
	Age	.031	.024	1.700	1	.192	1.032
	Enforceability	-.090	.210	.183	1	.669	.914
	Access to foreign bank	.809	.363	4.955	1	.026	2.246
	Constant	-.096	1.401	.005	1	.946	.909

a. Variable(s) entered on step 1: **Sector, Size, Age, Enforceability, Access to foreign bank**.

The categorical regression model includes the same independent variables used in logistic regression, the dependent variables change to the growth of sales or investment. The results of categorical regression are displayed in table 8.14, table 8.15, table 8.16, and table 8.17. No factors are significantly to influence the sale growth or investment growth, either in previous or in future three years at 95%.

Table 8.14: Effect on sales growth of the previous three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.187	.167	1.264	.295
Size	-.390	.258	2.279	.140
Age	.386	.395	.954	.335
Enforceability	.177	.258	.472	.497
Access to foreign bank	.048	.278	.030	.864

R square: .239

Table 8.15: Effect on sales growth of the future three years

Coefficients

	Standardized Coefficients				
	Beta	Bootstrap (1000) Estimate of Std. Error	df	F	Sig.
Sector	.273	.173	2	2.485	.097
Size	-.152	.222	2	.471	.628
Age	.230	.244	1	.889	.352
Enforceability	.024	.241	1	.010	.921
Access to foreign bank	-.192	.316	2	.372	.692

R square: .195

Table 8.16: Effect on investment growth of the previous three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.347	.190	3.338	.057
Size	-.443	.437	1.028	.323
Age	.387	.556	.485	.495
Enforceability	-.393	.377	1.088	.357
Access to foreign bank	.386	.456	.718	.501

R square: .491

Table 8.17: Effect on investment growth of the future three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.135	.205	.432	.658
Size	-.571	.335	2.907	.088
Age	.166	.330	.252	.623
Enforceability	.335	.439	.583	.571
Access to foreign bank	.044	.319	.019	.981

R square: .344

8.2.1.3 Summery of the foreign firms and the domestic firms

Based on the results of **logistic regression**, among the general constraints, **finance is not statistically significant** to influence the sales or the investment, either in the previous three years or the future three years. The analysis of categorical regression demonstrates that **finance is only significant to influence the sale in the previous years**. For the specific constraints, when using logistic regression analysis, in the previous three years, no constraining factor is significant to influence either the change of sales or of investment. **In the future three years, "enforceability" is significant to affect the change of sales, and the factor of "finance-access to foreign bank" is significant to influence the investment**. The results of categorical regression show no factors that are significant to influence the sale growth or investment growth, either in previous or in future three years.

8.2.2 The group of private firms and non-private firms

Based on the finding in Chapter 7, "finance" is only one general constraint whose effects are statically significant related to the factor of private ownership (the table 7.31 and table 7.34). Among the specific constraints of the WBES, "finance-paper work" is the only significant constraining factor. **The equation including the variable of finance as a general constraint has been investigated already in the section 8.2.1.** To study the variable of paper work, the following equations are estimated:

Previous sales $=\alpha+\beta 1\text{sector}+\beta 2\text{size}+\beta 3\text{Age}+\beta 4$ paper work$+\varepsilon$

Future sales $=\alpha+\lambda 1\text{sector}+\lambda 2\text{size}+\lambda 3$ Age $+\lambda 4$ paper work $+\varepsilon$

Previous investment $=\alpha+\beta'1\text{sector}+\beta'2\text{size}+\beta'3$ Age $+\beta'4$ paper work $+\varepsilon$

Future investment $=\alpha+\lambda'$ 1sector$+\lambda'$ 2size$+\lambda'$ 3 Age $+\lambda'$ 4 paper work $+\varepsilon$

The results of logistic regression of sales and investment changes are shown in table 8.18, table 8.19, table 8.20, and 8.21. To predict the business performance in the previous three years, the logistic model of sale change is not statistically significant as the p-value (.053) is more than 5%. In this model, the factor of age is significant at the 95% critical value, and the overall percent of correct prediction by this model is 86.8%. To predict the investment change in the previous three years, the overall percent of correct prediction is 59.3%. The logistic model is not significant as p-value (.323) is more than 5%, and no variables are statically significant. In the examination of sale change in the future three years, p-value (.335) is more than 5% implies the logistic regression model is not significant. In this model, the variable of paper work is

significant at 95% critical value as one tail test, and the overall percent of correct prediction is 90.8%. In the same period, the p-value of (.178) is more than 5% means the model of logistic regression of investment change is not significant at 95% critical value, and this model turns into significant at 75% critical value. Again, the variable of age is significant at 95% critical value, and the overall percent of correct prediction is 60.2% for investment change in the future three years.

Table 8.18: Effect on sales growth of the previous three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	9.344	4	.053
	Block	9.344	4	.053
	Model	9.344	4	.053

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	72.120[a]	.098	.165

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Classification Table[a]

	Observed		Predicted		
			VAR00014		Percentage Correct
			1.00	2.00	
Step 1	Sales	1.00	76	0	100.0
		2.00	12	3	20.0
	Overall Percentage				86.8

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	-.034	.345	.010	1	.921	.966
	Size	.257	.424	.368	1	.544	1.293
	Age	.044	.019	5.229	1	.022	1.045
	Paper work	.176	.308	.326	1	.568	1.193
	Constant	-3.080	1.463	4.433	1	.035	.046

a. Variable(s) entered on step 1: **Sector, Size, Age, Paper work**.

Table 8.19: Effect on sales growth of the future three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4.562	4	.335
	Block	4.562	4	.335
	Model	4.562	4	.335

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	48.863[a]	.051	.111

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Classification Table[a]

	Observed		Predicted		
			VAR00015		Percentage Correct
			1.00	2.00	
Step 1	Sales	1.00	79	0	100.0
		2.00	8	0	.0
	Overall Percentage				90.8

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	-.005	.440	.000	1	.991	.995
	Size	-.043	.522	.007	1	.934	.958
	Age	-.052	.049	1.160	1	.282	.949
	Paper work	-.762	.517	2.176	1	.140	.467
	Constant	-.398	1.739	.052	1	.819	.672

a. Variable(s) entered on step 1: **Sector, Size, Age, Paper work**.

Table 8.20: Effect on investment growth of the previous three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4.670	4	.323
	Block	4.670	4	.323
	Model	4.670	4	.323

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	121.384[a]	.050	.067

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00016		Percentage Correct
			1.00	2.00	
Step 1	Investment	1.00	25	19	56.8
		2.00	18	29	61.7
	Overall Percentage				59.3

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	.237	.250	.903	1	.342	1.268
	Size	.171	.302	.323	1	.570	1.187
	Age	.024	.018	1.723	1	.189	1.024
	Paper work	-.193	.225	.735	1	.391	.825
	Constant	-.647	.988	.430	1	.512	.523

a. Variable(s) entered on step 1: **Sector, Size, Age, Paper work**.

Table 8.21: Effect on investment growth of the future three years

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	6.303	4	.178
	Block	6.303	4	.178
	Model	6.303	4	.178

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	114.552[a]	.069	.093

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted		
			VAR00017		Percentage Correct
			1.00	2.00	

Step 1	Investment	1.00	37	12	75.5
		2.00	23	16	41.0
	Overall Percentage				60.2

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Sector**	.174	.257	.461	1	.497	1.190
	Size	-.450	.311	2.097	1	.148	.638
	Age	.037	.018	3.995	1	.046	1.037
	Paper work	-.115	.232	.244	1	.621	.892
	Constant	.021	1.022	.000	1	.984	1.021

a. Variable(s) entered on step 1: **Sector, Size, Age, Paper work**.

The dependent variables of categorical regression model again change accordingly to the growth of sale and investment, and the independent variables are still same. The results of categorical regression are displayed in table 8.22, table 8.23, table 8.24, and table 8.24. In the sale growth analysis of the previous three years, no variables are statistically significant at 95%. Only the variable of sector is significant to affect the investment growth of previous three years at the critical value of 95%. Again at the critical value of 95%, no variables are significant in the categorical regression of sale growth in future three years, and sector is significant in the categorical regression of investment growth.

Table 8.22: Effect on sales growth of the previous three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.135	.102	1.768	.180
Size	-.214	.153	1.959	.150
Age	-.075	.295	.065	.799
Paper work	-.333	.234	2.021	.161

R square: .176

Table 8.23: Effect on sales growth of the future three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.

Sector	.131	.123	1.139	.327
Size	-.268	.173	2.397	.100
Age	.086	.207	.173	.679
Paper work	.306	.344	.792	.503

R square: .166

Table 8.24: Effect on investment growth of the previous three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.343	.149	5.320	.010
Size	-.178	.224	.631	.433
Age	-.059	.393	.023	.881
Paper work	.219	.280	.611	.440

R square: .205

Table 8.25: Effect on investment growth of the future three years

Coefficients

	Standardized Coefficients			
	Beta	Bootstrap (1000) Estimate of Std. Error	F	Sig.
Sector	.322	.170	3.584	.042
Size	-.334	.194	2.950	.069
Age	-.260	.290	.802	.378
Paper work	-.337	.381	.784	.467

R square: .436

To sum up, the investigation of the general constraints is the same as the one of foreign and domestic firms. To study the specific constraints, in the logistic regression analysis, the variable of paper work is significant to affect the changes of sales in the future three years. According to the results of categorical regression analysis, the institutional factor named “paper work” is not significant to influence either the sales or investment, either in the previous three years or in the future three years.

8.3 Finding of logistic regression analysis and categorical regression analysis

As the foreign firms are invested by the overseas private owners, they belong to private firms in this research. The author hence does not only explore the constraints significant related to the factor of foreign ownership, but examines the significant constraints connected with the private

ownership factor. According to the finding **in Chapter 7, at 95% in the group of foreign firms and domestic firms, finance is statistically significant among general constraints**, and there are **two statistically significant constraints named "court-enforceability" and "finance-access to foreign bank"** among the specific constraints. **In the group of private and non-private firms, finance is again significant, and only one constraining factor of "finance-paper work" that is statistically significant.** Among the significant constraints, finance is the standout significant factor to both firm groups.

In the logistic regression analysis, the model including the variable "finance" is only statistically significant for the sale change in the previous three years at 95%. However, in all four models, the constraining factor of "finance" is not statistically significant influence the change of sales and of investment. However, the factor of firm age is statistically significant to affect both the change of sale in previous three years and the investment change in the future three years. **In the categorical regression analysis, finance is significant to influence the sale growth in the previous three years, and its effect is negative. In the other three models, finance is not significant** any more. In addition, the influences of finance on business performance are negative in the previous three years and positive in the future three years. The variable of sector is significant in the investigation of future performance.

In the logistic regression analysis of "court-enforceability" and "finance-access to foreign bank", the four models are not significant at 95%. "Court-enforceability" is statistically significant to the change of sale in future three years, and "finance-access to foreign bank" is statistical significant to affect the investment change in the future three years. In addition, firm age is significant to influence the sale change in previous three years, and the factor of firm size is significant to affect the investment change in the future three years. However, there are no significant factors in the categorical regression analysis.

Moreover, under the logistic regression analysis, this variable of "finance-paper work" is not significant in all four models at the critical value of 95%, and the variable of firm age is significant to change the sale in previous the investment in future. **In the categorical regression analysis, this factor is not significant** to influence the sale growth and investment growth at the given critical value of 95%.

8.4 Summary of regression analysis

The author chooses logistic regression and categorical regression to investigate the relations between the constraints and the firms' business performance, in terms of the change of sales and investment/the growth of sales and investment. The investigation covers the previous three years and the future three years. The analysis displays that the constraining factors might not be statistically significant to influence the business performance, although the same constraints are statistically significant related to some characters of these firms, such as foreign ownership and private ownership. Even if these constraints are significant, their significant influences are not constant. That is, the significant relations are either in previous three years or in future three years, either in sale growth or in investment growth.

However, one question arises about why the significant relations cannot keep constant. More importantly, along with the question related to the finding of Chapter 7, why the informal institutions are not statistically significant to influence business performance. These two questions can be summarised as to why the influences of institutions on business performance are limited and how to realise the limitation or problems in the application of NIEs theory in China. In Chapter 9, the author aims to answer these questions by re-examining the main findings of Chapter 6, Chapter 7, and Chapter 8.

Chapter 9 Research discussion

9.1 Introduction

The aim of this chapter is to thoroughly review and discuss the findings of Chapter 6, Chapter 7, and Chapter 8, based on the results of descriptive analysis, the Levene's test and Error bar, and of the regression analysis (logistics regression and categorical regression analysis). In the beginning, the author will discuss the findings of these three chapters separately to explain the analysis results. As the second step, the scholar tries to bring the findings together and re-examine the connections amongst these findings. Moreover, along with the theoretical foundation of the NIEs and the actual business environment in China, the findings will be further investigated to find the direct and indirect reasons behind the apparent evidences. In the end, the author links the research findings and the application of NIE theory to try to examine the policies about how to improve business performance in China.

9.2 The reviews of research finding

9.2.1 Descriptive analysis finding

According to the WBES data, there are 34.7% of firms that are foreign firms, and 76.2% of them are private firms in this research (Table 6.1). 67 firms (66.3% of total) regard financing as the major obstacle among the general constraints (table 6.2), and 80.2% of all firms regard financing as the problematic constraint (table 6.3 and figure 6.1). Moreover, this problematic financing constraint is still valid for firms with and without foreign ownership, for both private firms and non-private firms (table 6.4). The dissimilarity amongst these firms is the only different level of financing constraint that they face.

Corruption is the most obvious constraint belonging to the informal institutions. In fact, upon the WBES, there are only two corruption factors surveyed in China--- corruption as a general constraint and the corruption of bank officials. The issue of corruption is a pressing concern for China, as it is ranked the 4th problematic constraint for all firms, the 7th for foreign firms, the 4th for domestic firms, and the 5th for private and non-private firms (table 6.4). The corruption of bank officials is one which is selected as a problematic constraint by 32.3% of all firms (table 6.8). It is evident that foreign firms, non-private firms and private firms are less constrained by this factor, while the domestic firms are more constrained by the corruption of bank officials. **When turning to the formal institutions,** among the specific finance factors (table 6.6), credit information is the largest limitation for all firms. Although non-private firms

view paper work and high interest rates as their largest constraints. In the judicial functioning category (table 6.9), "court-affordable" is the number one constraint for all firms and for foreign firms. For domestic firms, the court-fair and impartial factor is the most important constraint. The private firms consider the court-enforceability as the most problematic one, while the non-private firms select the court-consistent constraint instead. Among the rules and regulations constraints, all firms view high tax as the number one obstacle, regardless of firm size (table 6.7). In Table 6.5, non-private firms view "avoiding tax" as the most serious competition constraint, while others regard "domestic price" as the most serious.

Subject to the limitation of the WBES data on the informal institutions, the comparison can be only applied on the formal institutions in China. The four kinds of firms investigated in this research all view "high tax" as the number one problem of rules and regulations. The majority consider "credit information" as the most difficult constraint under the category of financial constraints, apart from the non-private firms. Similarly, most view "domestic price" as the most leading competition constraint, whereas non-private firms view "avoiding tax" as the largest competition constraint. Their views on judicial functioning constraints are very contrasting. In fact, all firms have the same opinion about the obstruction of their business. The results of descriptive analysis can only show the similarities and differences of the apparent responses of the business constraints in China. Nevertheless, these analysis results cannot explain why the responses are similar or different, as this would require an in-depth analysis.

9.2.2 Research findings of Levene's test and error bar

Given the similarities and differences of the firms' responses as a percentage, it is important to discover whether the reaction can be linked to the fundamental characters of the firms, in terms of foreign ownership, of private ownership, and size of the firm. The Levene's test and Error bar are the two appropriate statistical tools to answer this question.

In the category of foreign firms and domestic firms, "**financing**" is the only general constraint that is statistically significant at 95%. "**Court-enforceability**" and "**financing-access to foreign bank**" are the two specific significant factors related to the foreign ownership factor. As all other constraints are not statistically significant, the similarities and differences of their responses to other business constraints should not be linked to the factor of foreign ownership. In addition, **the domestic firms are more constrained than the foreign firms by financing as**

a general constraint. For the specific constraints, **the domestic firms are less constrained by "financing-access to foreign bank" and "court-enforceability" than the foreign firms**. **On the informal institutions side, no constraints are significant either. The foreign firms are less constrained than the domestic firms, both by "corruption" as a general constraint and "corruption of bank officials" as a specific constraint**. Particularly, **corruption** is not described as a problematic constraint by the majority of the firms, and it **is not significantly related to the foreign ownership factor**. This result confirms the findings of descriptive analysis that corruption is not as serious as the existing literatures discussed in Chapter 3 about the business environment in China.

In the category of the private firms and non-private firms, **"financing" is again the unique statistically significant general constraint that is related to the private ownership**. **The private firms are less constrained by "financing" than the non-private firms**. **"Financing-paper work" is the only one significant specific constraint** that is connected with their ownership difference, and **the private firms are again less constrained than the non-private firms by this factor**.

9.2.3 Research findings of regression analysis

After having found the significant constraints, the author chooses the logistic regression and categorical regression to investigate the influences of these constraining factors on the business performance. The variables consist of "financing" as a general constraint, "finance-access to foreign bank" (AFB) and "court-enforceability" (CE) as the specific constraints for foreign/domestic firms, and "finance-paper work" (PW) for private/non-private firms. As no informal institutions are statistically significant to the ownership factor (which includes foreign ownership and private ownership), only the business constraints belonging to the formal institutions are investigated in the regression analysis.

Based on the logistic regression analysis including "financing", the model is statistically significant to the sale change in previous three years at 95%, and the variable of firm age is significant at 95% and the variable of financing is significant only at 75%. The model including AFB and CE is significant at 75% to the sale change in the previous three years. In this model, firm age and CE are significant at 75%. The investment model of the future three years is significant at 75%. In this model, the variables of firm size, firm age, and "financing" are also

significant at 75%. To study the sale change of the future three years, the model including AFB and CE is significant at 75% and CE is significant at 95%. The same model is significant to the investment change in the future three years at 75%, and the variables of AFB and firm size are significant at 95%. Given the critical value of 75%, the model including the PW is significant both to the sale change in previous three years and to the investment change in the future three years. In this model, firm age is the unique significant variable at 75%.

The author also applies the categorical regression to investigate the relationship between the same dependent and independent variables. The model displays that **"financing" is significant at 95% to negatively influence the sale growth in previous three years**. In this model, the variable of firm size is also significant and has a negative effect. The variable of firm sector is significantly related to the future growth of sale and investment. In the model containing AFB and CE, neither AFE nor CE is significant to influence the sale growth and investment growth in China. Through the investigation of the model including the variable of PW, at the critical value of 95%, the factor of firm sector is significant to affect both the sale growth and the investment growth in the future three years. At the critical value of 75%, the factor of firm size becomes significant to influence the sales growth in the past and in future, and also in investment growth in future. More importantly, **PW is also significant and negative to control the growth in sales in the previous three years**.

To sum up, investigating the results of two types of regression models at 95%, **only the model including "financing" is significant**. As a general constraint in this model, **"financing" negatively influences the sales in pervious three years**. The relation between the other institutional constraints and the business performance is not significant, either because the model is not significant or because the variable is not significant. If we change the critical value to 75%, ACF and CE are not significant to affect the business performance. Again compared to the 75% critical value, the model having PW is significant to investigate the sale growth in the previous three years, and in this model the constraint of PW is statistically significant to negatively change the growth of sales. Moreover, the factors of sector, firm size, and firm age are also able to influence the firms' business performance.

9.3 Research findings and the influences of institutions on business performance

In addition to the theoretical constraints (such as labour, land, capital, and technology), the economic reform in China comprises the restructuring efforts in its economy and society. This

reforming process is started by the external factor of FDI inflows in the beginning, and then sustained and accelerated by an internal factor of ownership change towards a gradual privatisation. Understood by the NIEs scholars, the business growth in China might be largely considered as the result of transition or moving away from its existing Marxist institutional system. After testing a number of hypotheses, the author tries to discover the relations between the institutions and the firms' business performance.

9.3.1 The business constraints and institutions in China

As a whole, the investigation shows that the institutions might have an effect on the business performance in China. The constraints can be allocated in several categories, which are financing, infrastructure, political instability, inflation, exchange rate, organised crime, corruption, tax and regulation. All firms surveyed by the WBES mentioned how they are constrained by these factors. In other words, the descriptive research findings confirm that the institutions, acting as "the rules of the game" (North, 1995: 8), shape the exchange activities and human organisation. North (1990) noted that the institutions can be acting as the rules of the game differently from one society to the others, and the differences result from the actual environment, i.e. objective endowment and subjective situation. In a transit and developing economy like China, both formal rules and informal institutions influence the business performance. Thus, the institutions can be considered as the basis of business studies as they determine the business operation and also contribute to a sustainable development.

In terms of reforming FDI policies and regulations, the business constraints can affect the business performance from various angles. Moreover, the institutional elements are complementary and substitute between each other, depending on the nature and character of economic growth (Aoki, 2001; Bruton et al., 2001). It can also be understood differently that, the institutions have their effects on the incentives and activities of the individuals, through the three categories of institutions which are cultural-cognitive, normative, and regulative elements (Scott, 1995). The institutions can therefore influence the business competition and business extension of the existing firms. Furthermore, the institutional factors are able to encourage or prevent the potential foreign and domestic investors from their investment behaviour and other business activities connected at present and in future.

9.3.2 The business constraints and the characteristics of the firms in China

There are four kinds of firms investigated in this research, including firms with foreign ownership, firms without foreign ownership, private firms and non-private firms. Therefore, to

explore the influences of institutions on business performance in China, it is necessary to investigate the relations between the institutions and the characteristics of these firms.

Among the formal institutions, "financing", "financing-access to foreign bank", and "court-enforceability" are three significant variables that are related to the factor of with/without foreign ownership. "Financing" and "financing-paper work" are the two significant factors that are connected with the different character of private firms/non-private firms. Among the general business constraints, "financing" is the only significant one both to the category of foreign invested firms/domestic firms, and to the category of private firms/non-private firms. Among the specific constraints, the factors named "financing-access to foreign bank" and "court-enforceability" are significantly related to the factor of foreign ownership, and "financing-paper" is significantly connected with private ownership. In addition, none of these specific factors is significant to both categories. Theoretically, the informal institutions are also the important, such as values, norms, beliefs, and culture, and as well as the enforcement characteristics of both formal and informal institutions (North, 1991). In theory, the influences of both formal and informal institutions direct and shape the motivations and decisions of the individual actors (Clague, 1997). However, through the examination of the WBES data, there in no informal institution that is statistically significant to the business performance in China, either as a general constraint or as a specific constraint, either in previous or in future.

When considering the significant constraint, the domestic firms look to be more constrained by financing as a general constraint. For the significant specific constraints, foreign firms could be more constrained by "financing-access to foreign bank" and by "court- enforceability" than domestic firms. It might also suggest that private firms are less constrained by "financing" than non-private firms, and less constrained by "financing-paper work". For the constraints that are not statistically significant to the factors of foreign investment or private investment, it seems that there is no common tendency about the investment character and the level of business constraints. That is to say, foreign firms might be more constrained by some obstacles and less constrained by other factors than domestic firms. Similarly, it looks that the private firms are more constrained by some factors, and the non-private firms are more constrained by the others.

Recalling the literatures in Chapter 3 and Chapter 4, the FDI oriented reforms are conducted by central government and regional government, and both the policies and the specific regulations are all designed to provide some advantages for FDI inflows. However, the implementation of

the most reforms did not entirely succeed in affecting the business performance. In other words, there is something else that is able to influence the application of these policies and regulations, and those issues cause the bias in the operational mechanism of the policies and regulations.

9.3.3 The business constraints and the evaluation of the institutional reforms in China

9.3.3.1 The general evaluation of the reforms

Table 9.1 The economic performance in China------FDI and GDP

	FDI	Annual growth	GDP	Annual growth	GDP per capita	Annual growth
Unit	US$ 100M (current price)	%	US$ Billion (current price)	%	US$ (current price)	%
1985	19.56		305.26		288.39	
1986	22.44	14.72	295.48	-3.20	274.84	-4.70
1987	23.14	3.12	321.39	8.77	294.05	6.99
1988	31.94	38.03	401.07	24.79	361.24	22.85
1989	33.93	6.23	449.10	11.98	398.48	10.31
1990	34.87	2.77	387.77	-13.66	339.16	-14.89
1991	43.66	25.21	406.09	4.72	350.61	3.38
1992	110.08	152.13	483.05	18.95	412.26	17.58
1993	275.15	149.95	613.23	26.95	517.42	25.51
1994	337.67	22.72	559.23	-8.81	466.61	-9.82
1995	375.21	11.12	727.95	30.17	601.01	28.80
1996	417.26	11.21	856.01	17.59	699.41	16.37
1997	452.57	8.46	952.65	11.29	770.59	10.18
1998	454.63	0.46	1019.48	7.02	817.14	6.04
1999	403.19	-11.31	1083.28	6.26	861.21	5.39
2000	407.15	0.98	1198.48	10.63	945.60	9.80
2001	468.78	15.14	1324.81	10.54	1038.03	9.77
2002	527.43	12.51	1453.84	9.74	1131.81	9.03
2003	535.05	1.44	1640.96	12.87	1269.83	12.19
2004	606.30	13.32	1931.65	17.71	1486.02	17.03
2005	603.25	-0.50	2256.92	16.84	1726.05	16.15
2006	630.21	4.47	2712.92	20.20	2063.87	19.57
2007	747.68	18.64	3494.24	28.80	2644.56	28.14
2008	923.95	23.58	4519.95	29.35	3403.53	28.70
2009	900.33	-2.56	4990.53	10.41	3739.62	9.87
2010	1057.35	17.44	5930.39	18.83	4422.66	18.26
2011	1160.11	9.72	7321.99	23.47	5434.36	22.88

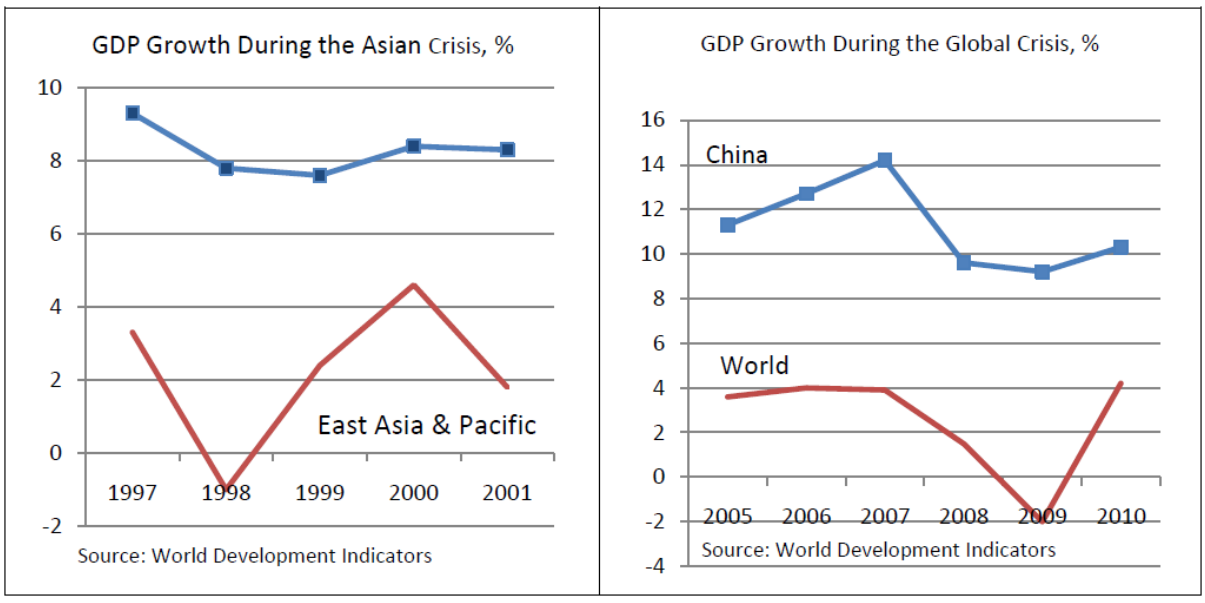
Source: FDI---Chinese statistical year book; GDP and GDP per capita---World Economic Outlook.

Table 9.2 The economic performance in China------Investment

	TOTAL INVESTMENT IN FIXED ASSETS	Annual growth	TOTAL INVESTMENT IN FIXED ASSETS BY Private Ownership	Annual growth	Investment share of private ownership
Unit	100 Million (Yuan)	%	100 Million (Yuan)	%	%
1994	17042.94		4631.12		27.17
1995	20019.26	17.46	5771.59	24.63	28.83
1996	22913.55	14.46	7084.05	22.74	30.92
1997	24941.11	8.85	7832.83	10.57	31.41
1998	28406.17	13.89	8725.68	11.40	30.72
1999	29854.71	5.10	9423.95	8.00	31.57
2000	32917.73	10.26	11472.23	21.73	34.85
2001	37213.49	13.05	14186.27	23.66	38.12
2002	43499.91	16.89	18436.94	29.96	42.38
2003	55566.61	27.74	28751.39	55.94	51.74
2004	70477.40	26.83	34763.50	20.91	49.33
2005	88773.60	25.96	51080.60	46.94	57.54
2006	109998.20	23.91	71006.00	39.01	64.55
2007	137323.90	24.84	93980.15	32.36	68.44
2008	172828.40	25.85	117826.23	25.37	68.18
2009	224598.77	29.95	146423.31	24.27	65.19
2010	251683.77	12.06	158325.37	8.13	62.91
2011	311485.13	23.76	218745.24	38.16	70.23

Source: Chinese statistical year book

Graph 9.1 The economic performance during the regional and global crises



To build a more liberal business environment, Chinese government starts its continuous institutional reforms through an international mechanism. As the problems of institutions are in

the areas of finance, law, corruption, the judicial system, rules and regulations, etc., the related reforms obviously have positive effects on the business operation of both the FIEs and the domestic firms. For example, the FDI in China increased from $ 19.56 million in 1985 to $ 747.68 million in 2007 (Table 9.1). From 1985 to 1991, the overall growth of the FDI inflows is more than doubled. In 1992 and 1993, the FDI inflows keep increasing at speed of about 150% per year. From 1994 to now, the growth of FDI inflows is stable except for the negative influences caused by Southeast Asian financial crisis. Globally, China's economic performance was outstanding during the East Asian financial crisis (1998) and the current global (2008) crises (Graph 9.1) (Lin, 2011).

According to the literatures in Chapter 3 and Chapter 4, the Chinese government actually started its elementary reforms in 1991 although the reform was apparently started in beginning of the 1980s. From 1991 to 1993, the reforms are also connected with the WTO negotiation, along with the most fundamental revolution by legitimately recognising the domestic private ownership in the first time after 1949. As one landmark of legal reorganisation in China, as the first time, the private investment data appeared in Chinese statistical year book in 1994. Increasingly competitive sectors, such as distribution, were opened to private enterprise and foreign capital. Overall, the Chinese economic reform has generated rapid economic growth over two decades and the country has moved from a centrally planned economy towards a market economy (Hu, 2005). Consequently, China has little by little abandoned its Maoist control in economy and society, and the reforms officially and legitimately followed the Western standard (Oi, 1992). The private investment grew faster than the total investment since 1994 (table 9.2). When considering the issue of time lag, the continuous growth of private investment since 1994 seems to provide evidence that the reforms lead the overwhelming development of private sector. The investment share of private investment increases from 27.17% in 1994 to 66.35% in 2007. As private investment depends on its profits or prediction, the faster growth of private investment has verified that the private investment is more efficient than government's investment in this same business environment (Serven and Solimano, 1992).

9.3.3.2 The constraint of business competition and the institutional reform

In the category of business competition constraints of the WBES, it suggests that no factor is significant to influence the business performance either of foreign firms or of private firms at 95%. As the variables in the regression models are based on the analysis of Levene's test and

Error Bar, it is possible that the firms are similarly constrained by the competition factors. It is also likely that, although they are differently constrained by the business competition reasons, the different constraint levels they face are not significantly related to the ownership difference. Thus, it is still important to review the situation of these competition obstacles explored in Chapter 6 and Chapter 7. In table 6.5 of Chapter 6**, all firms choose "domestic producers unfairly sell below my prices" (DP) and "violation of patent by the competitors" (VP)** as their top two business competition constraints. **DP is also the top constraint for the FIEs and private firms.** As it is usually impossible for domestic private producers to use DP in competition because DP also reduces their own profits, all firms who choose DP as their first concern in competition demonstrate that there should be other competitors using the DP. Interestingly, "receiving subsidies" (RS) is not significant either. When recalling the conclusion about the national banking system credit funds for the SOEs and the relation between government and the SOEs, it is easy to answer these questions and to understand why financing is statistically significant in affecting business performance in China.

As the subsidies from government are against the WTO accession agreement, "all forms of export subsidies inconsistent with WTO rules, including grants and tax breaks linked to export performance, were eliminated" (Rumbaugh and Blancher, 2004: 8). Chinese government has to make use of the national banking system controlled by government to potentially and indirectly maintain the SOEs in competition (Martin, 2012; Linton, 2006), instead of using the government subsidies. Positively speaking, the governmental behaviours in China are changed due to the international mechanism. On the negative side, the Chinese government has found that in order to achieve its own objectives, the new approach makes it unavoidable in breaking its own promise, which is to treat domestic and foreign enterprises equally. Similarly, the constraint of DP largely results from the same reason. All in all, financing support toward the SOEs is the reason behind the concerns of DP although DP is not significant. In addition, the function of financing support has taken the place of the other constraints, such as DP and RS, and financing issues also make the constraint of RS become less important.

Table 9.3 Violations of patents cases finished in the court of China

Year	1991	1993	1994	1995	1996	2001	2003	2004	2005	2006	2007
Number of cases	3823	2777	1662	1508	4009	5041	5411	8332	13393	14056	21026

Source: Chinese statistical year book

The patent violations have been regarded as an important part of business risks in China (Haley, 2003), and they also determine the core competencies of firms (Wang et al., 2004). The area of IPR protection of Chinese law was seen as critical to the prospects for the long-range economic development, as "rampant piracy of intellectual property in China has undermined foreign confidence in the Chinese market's ability to absorb foreign technology and copyrighted material without cannibalizing it" (Spierer, 2006). Moreover, Lee and Mansfield (1996) reported that China's weak IP protection has negatively influenced the US direct investment in China. In table 9.3, the number of VP cases finished by courts increased by about four times from 2001 to 2007, and this number grew very slowly before 2001. However, GDP growth and FDI inflows are similar in the two periods (table 9.1). This rapid increase in VP cases after 2001 again proves Chinese efforts along with its agreement of the WTO accession. The relative stable and small number before 1996 shows the vacuum of patent protection due to the law blankness. Along with the efforts to establish the mechanism to protect patents and other intellectual property rights, the social common reorganisation of patent protection has also been gradually set up in China. In other words, the reforms of formal institutions of patent protection successfully change the informal institutions related in China. With the social awareness of intellectual property right protection, everyone in China can use this legal weapon to protect their benefits of patents. That is another reason about the large increase in number of these cases. However, "while China has many laws to protect intellectual property… enforcement of such laws has been problematic as the court system is still in the process of reform, and relevant administrative bureaus have problems delegating authority" (Li, 2002: 650). In particular, Guvenli and Sanyal (2003) found that according to senior managers of American-owned firms in China, none of them found China's legal systems efficient and few found it fair when dealing with the problems of patent violations.

9.3.3.3 The constraints of finance and the evaluation of the institutional reforms

The research findings might exhibit that both the FIEs and private firms are the most problematically constrained by financing. Accordingly, there is a difference between the reform of institutions in finance and their effects in practice. In table 9.4, the credit share for local private owners is always less than 1%, and the credit share for foreign investment has been decreasing since 2001. According to the data in this table, the largest share of national banking system credit funds flows to non-private firms, such as the SOEs. For both the FIEs and private firms, it is evident that the financial support from the Chinese national banking system is far less

than the sufficient or even the necessary level when we compare the credit share for private firms to the investment share of private owners (Lin and Zhang, 2009). Furthermore, compared to the fast increasing investment of the foreign and domestic private owners, financing that acts as a constraining factor prevents both from fair competition with the SOEs in China. Without sufficient financing, they have to depend on their own approaches to seek funds with the additional costs and risks. Moreover, the growth of credit funds from national banking system is closely connected with the WTO negotiation. When China entered the WTO in 2001, the national treatment is a major commitment on trade-related activities (Rumbaugh and Blancher, 2004). At the same time, the financial benefits for the FIEs are in reality terminated by Chinese national banking system, and the government began to treat the FIEs and the domestic owned firms equally in terms of financial supports. Moreover, the US government made the first complaint against China in the WTO in 2004 as the US government alleged that China provided preferential treatment "for domestic semiconductor producers and that the preferences violated China's national treatment obligations" (Hufbauer et al., 2006: 55).

Table 9.4 The economic performance in China------National banking system credit funds

	Total NATIONAL BANKING SYSTEM CREDIT FUNDS	Annual growth	NATIONAL BANKING SYSTEM CREDIT FUNDS for local private ownership	Annual growth	Credit share	NATIONAL BANKING SYSTEM CREDIT FUNDS for FDI	Annual growth	Credit share
unit	100 Million (Yuan)	%	100 Million (Yuan)	%	%	100 Million (Yuan)	%	%
1994	49558.40		155.90		0.31	792.30		1.60
1995	64221.70	29.59	196.20	25.85	0.31	999.10	26.10	1.56
1996	79033.70	23.06	279.80	42.61	0.35	1346.30	34.75	1.70
1997	95008.10	20.21	386.70	38.21	0.41	1891.00	40.46	1.99
1998	110420.50	16.22	471.60	21.96	0.43	2487.50	31.54	2.25
1999	123230.60	11.60	579.10	22.79	0.47	2985.80	20.03	2.42
2000	135483.70	9.94	654.60	13.04	0.48	3049.80	2.14	2.25
2001	154876.10	14.31	918.00	40.24	0.59	3263.50	7.01	2.11
2002	184024.50	18.82	1058.80	15.34	0.58	2697.40	-17.35	1.47
2003	225313.30	22.44	1461.60	38.04	0.65	2569.40	-4.75	1.14
2004	262740.00	16.61	2081.60	42.42	0.79	2198.40	-14.44	0.84
2005	302042.80	14.96	2180.80	4.77	0.72	1975.30	-10.15	0.65
2006	365230.10	20.92	2667.60	22.32	0.73	1833.70	-7.17	0.50
2007	454267.80	24.38	3507.70	31.49	0.77	2069.10	12.84	0.46

Source: Chinese statistical year book (Note: The national banking system credit funds statistical data for local private ownership was not available after 2007)

There might be still some obvious shortcomings among the specific financing constraints, despite the inefficient national banking system in China. For the FIEs, it looks that the constraint of "**financing-access to foreign bank**" is also statistically significant to influence the investment change in the future three years. If considering the constraint of **finance as general** and the specific constraint of **financing-access to foreign bank** together, the institutions in China could not only limit the financial supports to the FIEs through its national banking system, but also prevent them from getting overseas funding. Similarly, it suggests that the private firms are both constrained by the factor of **finance** and by that of **financing-paper work**, and they have to face more problems in getting domestic funds, in the context of "bureaucratic sabotage" (Brecht, 1937) in the national banking system. Actually, it is impossible for the private firms in China to access to funds abroad because the rules and regulations will block such attempts. Evidently, the institutions are not effective enough to sustain the growth of private capital in China.

The author might conclude, although the reforms of financing institutions announced by Chinese government have contributed to the growth of FDI inflows and domestic private investment, the financing reforming is not towards a marketing oriented economy and still less than an essential level to maintain a sustainable growth of the private sector. As Linton (2006: 9) mentioned, "the FIEs have limited access to capital in China. Most FIEs depend on parent company financing and the reinvestment of profits earned locally. It is very difficult, however, for smaller FIEs to obtain funds without ties to local bank managers or loan officers". As the most reliable source of local funding, foreign banks can however raise only limited amounts of capital (EIU 2006). On the contrary, after joining the WTO, the financing reform is indeed to encourage the growth of SOEs and to control the expansion of non-state ownership in China, in order to protect the socialist economy ultimately (Hassard et al., 2007; Xie et al., 2012).

9.3.3.4 The constraint of rules and regulations and the evaluation of institutional reform

Djankov et al. (2006) demonstrate the countries with better regulations grow faster by using objective measures of business regulations. However, the analysis of Levene's test and Error bar may display all variables in the category of rules and regulations constraints are insignificant at 95%. Among these rules and regulations variables, custom regulation constraint (CR), labour regulation constraint (LR) and foreign exchange constraint (FER) become significant to the

difference of foreign ownership, compared to the 75% critical value. There could be a relatively close connection between the responses on these three constraints and the foreign ownership factor. It also suggests that the foreign firms are more constrained by LR and FER and less constrained by CR than the domestic firms. At the 75%, it also seems that FER and tax administration regulation (TAR) are two significant factors towards the difference in private ownership. Private firms look to be more constrained by TAX and less constrained by FER. To sum up, it might demonstrate the constraint of foreign exchange regulation is significant to the ownership difference in China.

The descriptive analysis might display no firms choose the factor of rules and regulations as their top constraint (Chapter 6: table 6.4). Given the special arrangement in rules and regulations to attract FDI inflows, the FIEs that might be still more constrained by FER could imply that the FER reform is still not sufficient and effective. Linton (2006) noted the restrictive foreign exchange control system further complicates FIEs access to capital as China employs these complex regulations to maintain currency transactions that are generally open on the current account but closed on the capital account. Base on a survey conducted by the Pricewaterhouse Coopers, financial and tax issues, and particularly the regulation of capital and earnings, as one of the greatest challenge of investing in China. They also cite difficulties in obtaining loans and banking services that are inadequate to meet demand (Pricewaterhouse Coopers, 2004: 6-7). The latter complaints are also similar to the problems faced by domestic firms (Tam, 2005). "Off-shore sources of finance often are critical to FIEs; foreign exchange controls and a complicated regulatory environment substantially undercut their access to capital" (Linton, 2006: 9).

The situation of CR displays the reform related is already efficient for FDI implementation. For the LR constraint, it is possible that the applicable practices of LR turn out to be business obstacles for the FIEs. However, as some FDI enters China to enjoy the regulating blankness in business operation (Wang and Meng, 2004; Dean et al., 2009), the ongoing reform in setting up a system of regulations will clearly prevent some FIEs from operating their business in China. Similarly, the business obstacles of TAX and FER also indicate the success of reforming foreign exchange policies and the failure in the reforms in the institutions connected with TAX.

Du (2009) notes that China's experience demonstrates that administrative governance may have been instrumental in the absence of adequate market-supporting legal institutions. Together with the reforms in laws and courts, the legislation reform additionally leads to the changes of rules

and regulations in China. Among them, on the domestic aspect, the Interim Provisions on Guiding FDI is the most important one to "classify four categories for FDI----encouraged, permitted, restricted, and prohibited. The regulations aim to encourage greater geographic dispersion of FDI inflows to China, and promote FDI inflows into targeted sectors and industries. In broad terms, projects are encouraged and permitted in designated industries that introduce new and advanced technologies, expand exports capacity, raise product quality, and use local resources in the central and western regions. Restricted and prohibited are projected in designated sectors that make use of existing technologies, compete with domestic production or state monopolies, make extensive use of scare resources, or are deemed to be a danger to national safety and the environment" (Tseng an Zebregs, 2002: 12-13).

Table 9.5 The number of bilateral investment treaties concluded as of 1 January 1997

Total	Developed countries				Developing countries		Central and eastern European countries
	Western Europe	United states	Japan	Other developed countries	Within region	Outside region	
80	16		1	3	21	18	21

Source: Chinese statistical year book

On the international side, both multilateral and bilateral agreements support further domestic reforms of rules and regulations. Among them, the WTO agreement introduces the multilateral mechanism to China. "China has made substantial commitment though the international mechanism in trade and investment liberalisation as a part of the WTO accession agreement. The general commitments include non-discriminatory treatment of foreign and domestic enterprises, adherence to WTO rules on intellectual property rights, and elimination of various requirements on FDI, including foreign exchange and trade balancing, technology transfer, local content, and export performance. Sector commitments involve significant expansion of market access, particularly in the services sector. These involve eliminating geographic and other restrictions in key sectors and increasing foreign ownership limits in telecommunications, life insurance, distribution and retailing, securities, and giving full national treatment to foreign banks" (Tseng an Zebregs, 2002: 12-13). Additionally, the bilateral agreement also directs the reforms of rules and regulations. Before China entered the WTO, the bilateral negotiation mainly refers the bilateral investment treaty (table 9.5). Gradually, the free trade agreement becomes the new target, such as the ASEAN-China Free Trade Area. As a result, the international cooperation helps to maintain the reforming policies and reduce redistributive

intervention in China and to benefit the investment of foreign owners and domestic private owners (Frieden and Rogowski, 1996).

9.3.3.5 The business constraint of corruption and the evaluation of institutional reform

Recalling the investigation in Chapter 7, it looks that the foreign firms are less constrained by corruption, and the private firms are more constrained instead. Moreover, it suggests that the corruption constraints are not significant towards the factor of different firm ownership. The ownership type is thus not the central reason which causes the difference, as a general constraint or as a specific constraint. As an important business constraint of the informal institution, does the insignificance of corruption variables mean that corruption is no longer serious in China? As the regression section of this research only studies the variables that are significant in Levene's test, it is necessary to re-explore the corruption from an altered angle.

Table 9.6 The Control of Corruption data of China

Year	1996	1998	2000	2002	2003	2004	2005
% Rank	43.90	45.85	50.73	33.66	43.41	34.63	31.71
Year	2006	2007	2008	2009	2010	2011	2012
% Rank	37.07	33.50	35.44	34.93	32.38	35.07	39.23

Source: The Worldwide Governance Indicators, the World Bank.

In 2001, Chinese courts at all levels investigated over 36,000 cases of corruption with the value of more than 4.1 billion Yuan. From 1994 to 2001, the number of people charged by corruption grew at an average annual rate of 12.5% (Chinese Statistical Year Book). The World Bank point out that the corruption in China becomes more serious between 1996 and 2007 (table 9.6). Allen et al. (2005) also verifies that China's corruption is the worst among the seven developing countries. In fact, the corruption in China does not become better, and the firms face more corruption constraints than before.

Table 9.7 Corruption in Asia Pacific Region

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE
1	1	New Zealand	9.3
1	1	Singapore	9.3
8	3	Australia	8.7
13	4	Hong Kong	8.4
17	5	Japan	7.8
33	6	Taiwan	5.8

36	7	Bhutan	5.7
38	8	Brunei	5.5
39	9	Korea (South)	5.4
46	10	Macau	5.0
56	11	Malaysia	4.4
62	12	Samoa	4.1
73	13	Vanuatu	3.6
78	14	China	3.5
78	14	Thailand	3.5
87	16	India	3.3
91	17	Kiribati	3.2
91	17	Sri Lanka	3.2
101	19	Tonga	3.0
110	20	Indonesia	2.8
110	20	Solomon Islands	2.8
116	22	Mongolia	2.7
116	22	Vietnam	2.7
127	24	Timor-Leste	2.5
134	25	Bangladesh	2.4
134	25	Philippines	2.4
143	27	Maldives	2.3
143	27	Pakistan	2.3
146	29	Nepal	2.2
154	30	Cambodia	2.1
154	30	Laos	2.1
154	30	Papua New Guinea	2.1
176	33	Afghanistan	1.4
176	33	Myanmar	1.4

Source: Transparency International

Common logic states that a foreign investor should be unwilling to invest in a country with a high level of corruption as there would be an increase in transaction costs due to bureaucratic barriers and the likelihood of possible fraud of the investment (Javorcik and Wei, 2009; Campos et al., 1999; Habib and Zurawicki, 2002). Based on an analysis of quantitative measures of the business environment, the study of Fries et al. (2002) shows business obstacles that added costs and constraints on business, especially such as corruption. However, although corruption is generally accepted as one of the main business obstacles in China, we do not find a significant difference between the two categories at 95% when corruption is as a general constraint. Why do the foreign firms and the domestic firms have similar responses? More importantly, does corruption practically affect the business performance in China? To answer these questions, we have to compare the corruption in China to that of other countries, by using the corruption perceptions index (CPI). Defined by Transparency International, the CPI is based on a scale from 10 (highly clean) to 0 (highly corrupt). China is ranked in the 14th in the region of Asia Pacific, and ranked in the 78th in the CPI 2010 score globally (table 9.7). According to the World Bank Corporate Corruption/Ethics Indices, China is ranked the 52nd in the category of

corporate illegal corruption index component, and also ranked the 21st in the category of corporate legal corruption index component. In other words, when the corruption is regarded as a business constraint, the business environment in China is not noticeably worse than the other main developing countries in the Asia Pacific region and around the world. On the contrary, an outstandingly economic growth, an extending market size and the enormous business opportunities in China should be able to eliminate the negative influences caused by corruptions in business operation.

According to the NIE, the relation between the formal and informal institutions is substitute between each other. Due to the availability of the WBES data in China, there are only two corruption variables examined. Without more corruption variables, the connection between them is helpful in this research. The World Bank views good governance and anti-corruption as important to its poverty alleviation mission. According to the Global Competitiveness Report 2004/2005, traditionally, national governance and corruption challenges have been seen as: i) particularly daunting in the poorer countries, with the richer world viewed as exemplary; ii) anchored within a legalistic framework and focused on formal institutions, iii) a challenge within public sectors, and, iv) divorced from global governance or security issues---seen as separate fields. The World Bank constructs a new set of Corporate Corruption and Ethics Indices , encompassing forms of (legal) corruption not subject to measurement in conventional (illegal) corruption indicators. It is found that manifestations of "legal corruption" may be more prevalent than illegal forms, such as outright bribery, and particularly so in richer countries. Further, corruption in particular is a key determinant of a country's global competitiveness. Although the variable of legal corruption is unavailable, the regression analysis including the significant variable of court-enforceability can not only describe the corruption in the area of legislation, but also partly explain the influences on the business performance caused by the corruption in the other areas, such as the corruption in business competition, and the corruption in rules and regulations.

Kaufmann et al. (2000) conducted an empirical analysis of governance and corruption, and they particularly pay attention to "state capture" as the propensity of firms shape the underlying "rules of the game". In this study, as the unique significant general constraint, the importance of financing can explain the influence of bank officials' corruption. Because of the decision-making role under the communist system, "explicit corruption represents the expansion of these privileges through the illegal efforts of such individuals in their official capacity. Due to their

control of state-owned resources, party officials can often extort bribes from those in need of their services. … … In China, the best methods for detecting corruption are studying rent-seeking behaviour as well as corrupt activities and data either stated or implied by the government. The main types of corruption in China are tax evasion; rent-seeking behaviour; involvement in the underground economy, where the management of the goods is legal, but the income is illegal; involvement in the underground economy, where the management of the goods is illegal; and the abuse of public investment and expenditures" (Tao, 2003: 9-10).

9.3.3.6 The constraint of judicial constraints and the evaluation of institutional reform

The descriptive analysis in Section 6.4.6 of Chapter 6 indicates that the firms' responses on the judicial constraints are totally different from one to another as those firms select the diverse factors as the most problematic business obstacle. They seem to be constrained by all judicial constraints at a relatively high level. Upon the Levene's test and Error bar, it shows that court-enforceability (CE) is the unique significant factor related to the difference of with/without foreign ownership at 95%. At the 75% level, it suggests that court-fair and impartial (CFI) become significant to the category of private and non-private firms, and court-affordable (CA) and court-consistent (CC) become statistically significant in the case of foreign owned firms and domestic invested firms. More importantly, it seems that CE is statistically significant to lead to the sale change in the previous three years and in the future three years at the 75% critical level.

Table 9.8 Civil cases finished in the court of China

Year	1996	1997	1998	1999	2000	2001	2002	2003
Number of cases	3093995	3277572	3375069	3519244	3412259	3459025	4420123	4410236
Year	2004	2005	2006	2007	2008	2009	2010	2011
Number of cases	4432727	4380095	4385732	4724440	5412591	5800144	6090622	6614049

Source: Chinese statistical year book

Buscaglia and Domingo (1996) stated that the adoption of market reforms have created additional demands for court services. In addition, as an increase in GDP implies an increase in the number of transactions that can result in a potential possibility for conflict, "the number of transactions per individual as proxied by the level of real per capita GDP positively influences the amount of litigation per capita" (Clemenz and Gugler, 2000: 215). Consequently, there should be a positive relation between these two factors given the same or similar judicial cost.

Based on the WBES, the FIEs are more constrained by all judicial obstacles than the domestic firms, and private firms are more constrained than non-private firms. Thus the FDI favourite policies and the reforms connected in Chinese judicial system have partly failed to achieve their objectives although China has been successful to absorb a large amount of FDI. The unsuccessful reform of judicial system can also be verified by the data in the table 9.8. In this table, the number of civil cases finished in court rapidly grows before China enters the WTO in 2001, and decreases afterward. Although the finished civil cases cannot represent everything of the judicial reform, the decreasing tendency is still inconsistent with the macro economic data in table 9.1. The relation between the fast economic growth and the decreasing number of civil cases can be explained by the fact that the judicial cost is increasing or the judicial system is not as efficient and effective as it should be. Accordingly, the reform in the judicial system is outstanding alongside the Chinese WTO negotiation before 2001. However, the efforts afterward are not as successful.

Table 9.9 The Rule of Law data of China

Year	1996	1998	2000	2002	2003	2004	2005
% Rank	36.36	38.76	35.89	39.23	40.19	38.76	37.80
Year	2006	2007	2008	2009	2010	2011	2012
% Rank	37.32	41.15	45.19	45.50	45.50	43.66	38.86

Source: The Worldwide Governance Indicators, the World Bank.

The investigation about unsuccessful judicial reform in China can also be found by a World Bank project---the Worldwide Governance Indicators, in percentile rank terms from 0 (lowest) to 100 (highest) among all countries worldwide (Kaufmann et al., 2010). In this project, the Chinese data of Rule of Law can exhibit its reforming judicial system, by "capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence" (Kaufmann et al., 2010: 4). In table 9.9, from 1994 to 2007, the Rule of Law data declines from 48.57 to 44.9. In every six years, the tendency is decreasing except from 1998 to 2004. Based on a survey, the managers of US multinational companies considers the Chinese legal system as inefficient and unfair in terms of legal protections of product piracy and patent violations (Guvenli and Sanyal, 2003). Similarly, Allen et al. (2005) examined Chinese legal system and compared them to the average measures of 49 countries' study conducted by La Porta et al. (1998). Allen et al. (2005) also suggest that the majority of the 49 countries have a better creditor and shareholder protection than China and the

progress of China's legal system is not ahead of the other major emerging economies, though China has adopted various protection measures into the law.

To have an effective law enforcement system, in theory, a country must have an independent and efficient judicial system with a sufficient supply of qualified legal professionals. "Increasing delays, backlogs and the uncertainty associated with expected court outcomes have diminished the quality of justice. The judiciary is faced with several obstacles, including a dysfunctional administration of justice, lack of transparency, and a perception of corruption" (Buscaglia, 1998: 582). The Ministry of Justice of China have stated there are 110,000 lawyers and 9,000 law firms by 2002. Compared with data in table 9.6, lawyers represent only 2% of all clients in civil cases. Moreover, "only one-fifth of all lawyers in China have law degrees, and even a lower fraction of judges have formally studied law at a university or college. Needless to say, it will be a long time before China has a strong legal labour force" (Allen et al., 2005: 67). Another fact connected with the ineffective judicial reform is many new laws are not effectively enforced in China. The primary reason is the unavoidable conflict of interest between practicing law in the "fair play" business operation and keeping the monopoly power of the single ruling party, especially in cases in which government ownership and its officials are involved (Wilson, 2003). Wilson (2003: 1008) also noted that "China's legal system has progressed rapidly from ruin to reform. It still fails, however, to provide the basic legal rules upon which market economies rely. A stable, predictable legal system is imperative for successful investment. Without it, assessing and allocating risk is impossible". Blodgett et al. (2009: 231) concluded that in the transition from its command-and-control economy toward the creation of a socialist market economy, "China must continue to reform its legal system, especially emphasizing the need for the existence of a judiciary free from Communist Party influence".

9.3.4 The relation between the formal and informal institutions in China

According to the findings in Chapter 8, there are four statistically significant variables that influence the business performance, including "financing" as a general constraint, and the specific constraints named "financing-access to foreign bank", "financing-paper work", and "court-enforceability". According to the NIE theories, they all belong to the formal institutions, and the variables of the informal institutions in China are not statistically significant to affect the business performance of the firms at the critical value of 95%, As this finding apparently does not support the NIE theories that both formal and informal institutions influences the business performance, it is therefore essential to investigate the relations between the corruption factors

and the significant variables included in the regression analysis of this research, in order to clarify application of the NIE in China.

Scholars argue that the corruption problems are from the basic cultural characters in China as Chinese have a long tradition of placing personal connections above the law, due to its cultural background. Therefore, "China's corruption problems can never be avoided no matter what political, economic, or social changes are brought about in the future". However, "there is nothing to suggest that there are characteristics within Chinese culture that encourages corruption as opposed to Western cultures…….After a period of time when the new social norm gradually takes root, the political-legal environment can change people's perceptions and behaviour"… … therefore, "the true cause of China's recent corruption problems is due to the lack of separation between business and government, a weak judicial system and minimal economic transparency" (Tao, 2003: 7-8). Fundamentally, the reason is **the overwhelming power of the Chinese Communist Party in both the political and economic affairs**.

The legal system should be an instrument of the ruling government to preserve social order. "The most basic form of judicial independence, decisional independence, refers to the ability of judges to decide cases independently in accordance with law and without (undue, inappropriate, or illegal) interference from other parties or entities… … Courts must not only be strong enough to resist pressure from outside forces in deciding cases; they must also have the authority and power to ensure that their judgments are enforced and that other political actors comply with their orders" (Peerenboom,2008: 3). However, in a socialist state, the party always makes use of influence in ideology, policy, and personnel matters, and the communist party even sometimes is involved in deciding the outcome of particular cases (Peerenboom, 2002). As a result, judicial decisions are practically often arbitrary and do not necessarily follow the sentencing guidelines set out in the Chinese constitution or the criminal and civil codes. In the Chinese communist system, it is impossible to prevent the executive and legislative powers from interfering in judicial matters. Due to a lack of trust in the fairness and supposed impartiality of the judicial system, actors who engage in corruption can seek protection from the legal system, and all actors within a marketplace of China think not in terms of long-term benefits, but in terms of short-term gains. Therefore, the author confirms the findings that the judicial constraints and the corruption can be substitute to each other (Choi and Thum, 2005), as "weaker legal systems and unstable conditions for economic activity increase corruption" (Buehn and Schneider, 2006: 24).

Related to the business constraints in the financing area, bank fraud has cost Chinese banks more than US$2.8 billion annually since 2000 (Zhou, 2006). The view of the Ministry of Public Security of China – the country's top police authority, is that bank corruption is obviously increasing and expected to worsen with the rapid economic development (Wu, 2008). Considering local interests, personal profits and/or political achievement and promotion, local government and party officials would interfere in the criminal justice system regarding investigation of bank fraud and corruption cases. Furthermore, according to law, procuratorates are independent agencies which have considerable powers of investigation and prosecution regarding public corruption. In reality, however, since almost all senior government officials are party members, the fact that criminals are protected by "connection networks" and "protective umbrellas" makes the problem of corruption a more structural and cultural one (Cheng and Ma, 2009). Thus, the complaints related to corruption in the banking system of China can also easily lead to the connection with the specific financing constraints, and it is obvious that, as the important parts of shadow economy, the constraint of corruption of bank officials and the financing constraints can also replace each other (Buehn and Schneider, 2006).

Corruption is a non-transparent activity that an investor pays a bribe to an official to seek benefits, such as the unfair court judgement and the funding supports from Chinese banking system. Due to the illegal nature of corruption, it will create an atmosphere of uncertainty for investment. Acting as an additional tax on FDI, corruption may create incentives for investors to move away from under the control of government regulations. Subsequently, corruption reduces a firm's competitive advantage with less protection and the probability to fairly settle the disputes between foreign and local firms in the courts. In China, the financing obstacles lead to the constraint of corruption of bank officials, and the corruption in judicial systems results in the constraints related to the courts. However, as the investigation of corruption is a very political sensitive area in China, **a personal exploration can be regarded as the illegal behaviour** and the individuals involved in the survey might be sentenced to jail **unless the survey is approved by the government**. Moreover, as this permission means **the Chinese governmental involvement in the whole survey process, this survey would not be independent any more once the government is also able to access the survey dataset**. Thus, although the WBES is officially granted in China, it is reasonably to believe that the persons surveyed logically choose the other business constraints closely related to the corruption factors to describe the corruption, instead of answering the political sensitive questions directly. To sum up, subject to the availability of corruption data officially approved, the interaction between the formal and

informal institutions mainly is a substitute relation between them. As a consequence, the study of the informal institutions in China can be substituted by the analysis of the formal institutions.

9.3.5 The business constraints and the three main elements of NIE

The evaluation of business constraints implies the different aspects of business operation in China, i. e. a rapid economic growth, macro policies to attract the FDI inflows, business regulations to apply these policies, financial supports connected with the reforms, legal and administrative reforms to protect the benefits of investment, anti-corruption and anti-unfair competition efforts to correct the bias in the competition. Besides the improvement in the Chinese business environment, there exist some obvious shortcomings of the institutions, such as the obstacles for private investment and their business operation. Based on the individual evaluation between the business constraints and the institutions, it is also important to apply the theoretical foundation - the NIE - to evaluate the application of Chinese reforming policies and the business constraints as a whole. The three core elements of the NIE, which are transaction cost, PA theory, and the property right, are all closely connected with the reforming procedure in China. The efforts to change the formal and informal institutions work together and lead to the extraordinary achievement-a better business performance and rapid economic growth.

China faced problems to develop its economy in the beginning and afterward, i.e. the shortage of capital, skilled labour, resource as the normal constraints for every nation (Smith, 1776). However, even if China acquires these essential resources for its economic growth, as a transit economy, China has to overcome more obstacles connected with its existing system under the control of the Chinese Communist Party (CCP) (Lin, 2009). Therefore, it is urgent to abandon its Marxist institutions to build a marketing oriented economy. However, the core reason of economic reform is to keep the political power of the CCP, and the reforming or changing process should be gradually improved to avoid the social crisis happening in the other countries, instead of a “shock” treatment. It requires the changes or reforms that can only be externally started in the beginning and then sustained internally. Also, the reform needs to be monitored and directed by the international mechanism to get rid of the Communist effects in the domestic financial, legal, and administrative areas (Behr, 2007; Hutchens, 2003; Chen, 2010).

To achieve a sustainable growth, China has to create a business system based on marketing competition that disappeared once China was controlled by the CCP in 1949. It is thus essential for the Chinese reform designers to combine the individual benefits and their contributions

altogether to encourage the individual incentives of actively making profits and innovation. When considering the objective of building this necessary basis, a number of new governmental policies should be issued and their effectiveness and influences depend on the application of PA theory. Under the mechanism following PA theory, the principal's resources are able direct the agent' behaviours by satisfying the objectives and interests of the agent. On the other side, as the trust between them is essential in a long-standing principal-agent relation, the principal has to find a proper approach to monitor the agent's performances when minimising or avoiding the additional costs in the evaluation and judgement of the principal. Clearly, a marketing oriented system with the design of contract included is an appropriate arrangement to assure the efficiency and effectiveness of the PA relation.

The private property right is centrally located in business growth. The NIE agree that good institutions must secure property rights, enabling people to keep the returns on their investment, make contracts, and resolve disputes. The security of property rights can boot the investment in human capital and in physical capital. It is thus necessary that the individuals are able to gain benefits from the production and exchange, and to take the risks of losses in marketing transaction. Admitting to private ownership can assure the individual's ability to have profits or losses in competition as there is no ability to make any contracts or agreements compulsory to individuals. Given this ability under their own control, the individual can have its inner motivation to pursue its own benefits. At a macro level, the PA relation can have an effect on the expectation of the individuals and in turn to influence their behaviours.

However, private property rights and market based economies are both entirely against the principles of the Marxist. Under the control of the CCP, any behaviour related to them was regarded as illegal before the 1980s. It is impossible to create market competition and private ownership internally in China. In fact, the underdeveloped economy was also a threat to the CCP and it might lose the control of China. Thus, the private ownership can only be introduced from overseas and the FDI is the best option to start the reform. In additions to the fact that the FDI itself can solve the problems of capital shortage, the introduction of FDI also transported the private property right in China. More importantly, the CCP government has to protect private ownership because the government has signed the multilateral and bilateral agreements of investment protection. To avoid the possibility of economic crisis caused by a U-turn reform, China set up a dual legal system and economic system to deal with the FIEs and domestic invested firms respectively. The dual system consists of legislation, finance, marketing

administration, anti-corruption, rules and regulations. When the economic growth target is successfully achieved, the advantages of private property rights can be realised and recognised by public. Gradually, the acceptance of private ownership results in the intangible changes in China. With the changes in economy and society, the official and public recognition of domestic private ownership will help accelerate the in depth business growth. Therefore, even in Post-WTO China, the political economy of reforms suggests that "although evolutionary trends point towards convergence in the long term, the dual systems of foreign investment regulation are likely to persist, at least to some degree, in the foreseeable short term" (Huang, 2009: 187).

After smoothing the conflict between the Communist principles in Chinese authorities and the development objective of building a marked based economy with private ownership, the tasks should concentrate on the efforts to reducing the transaction costs in China. As the transactions are connected with costs that might result in the uncertainty, a large amount of transaction costs can even cause market failures (North, 1993; Williamson, 1985). As "transaction costs are those costs involved in measuring what is being exchanged and in enforcing agreements" and "competition plays a critical role in reducing enforcement costs" (North, 1993: 160), the priority for developing countries is to reduce the transacting costs in order to attain an efficient market operation to develop the business subsequently.

According to the United States Trade Representative (2011: 2-3), "following China's accession to the WTO, Chinese leaders took many impressive steps to implement a set of sweeping commitments. China reduced tariffs, eliminated non-tariff barriers that denied national treatment and market access for goods and services imported from other WTO members, and made legal improvements in intellectual property protections and in transparency. These steps unquestionably deepened China's integration into the international trading system, strengthening both China's rule of law and the economic reforms that China had begun in 1978. ……Despite this progress, the overall picture currently presented by China's WTO membership remains complex, given a troubling trend in China toward intensified state intervention in the Chinese economy …… Increasingly, trade frictions with China can be traced to China's pursuit of industrial policies that rely on trade-distorting government actions to promote or protect China's state-owned enterprises and domestic industries. In fact, in recent years, China seems to be embracing state capitalism more strongly, rather than continuing to move toward the economic reform goals that originally drove its pursuit of WTO membership. ……some Chinese government policies and practices raised increasing concerns that China had not yet

fully embraced the key WTO principles of market access, non-discrimination and transparency. ……the prevalence of interventionist policies and practices, coupled with the large role of state-owned enterprises in China's economy, continued to generate significant concerns ……. Major issues included China's indigenous innovation policies, serious problems with intellectual property rights enforcement, and China's slow movement toward accession to the WTO Government Procurement Agreement, as well as continued market access barriers and discrimination against foreign enterprises in numerous sectors of China's economy".

NIE scholars consider the institutions are made up of the formal and informal institutions. Differed from the Western economies, **the author tries to allocate the transaction costs in China into three different categories that contain both types**. **The transaction costs in the first category are connected with the activities of transaction in business operation and market competition** (Coast, 1960; Johanson and Vahlne, 1990; Liu, 1995; Standifird and Marshall, 2000). Similar to those in the other countries based on a market based economy, this kind of transaction costs can be reduced to a minimum level, but it will never disappear in reality. However, in the beginning of economic reform, this kind of transaction costs are fairly high as there is no real market and competition in China. The reforms related to these transaction costs should be linked to the attempts to study and introduce the experiences of the other countries having an advanced marketing operation. Therefore, the application of this kind of reforms is mainly dependent on the multilateral and bilateral negotiation on one side, and the introduction of a matured institutional system to maintain marketing operation on the other side.

After the reform started, there are actually **two other kinds of institutions belonging to the second category**, which are the existing institutions based on the CCP's principles and the institutions being set up coming from the Capitalist side (Bremmer, 2010; Guthrie, 2001; Jones, 1994; Li et al., 2000; White et al., 1996) . The dual system in the reforms is inevitable to avoid any possible chaos and confusions caused by the conflicting institutions in one country. The transaction costs emerge and they are the conflicts between the issues related to the dual systems in China. The aim of protecting the principles of Marxist and encouraging market competition causes an inevitable problem for the CCP as the Marxist aims to eliminate the Capitalist. With this dilemma, no policies and the applications related are entirely able to reach the original aims of economic growth and development.

As a result, the implementation of reforms in China comprises differences at various aspects. In the beginning, the most apparent one is the geographical difference when FDI can only be operated in specific cities and areas. The block caused by regional differences brings out the supply and demand problems in business operation. On the supply side, the FIEs cannot acquire the materials needed for production, while it is impossible to extend their market on the demand side. The most important dissimilarity is the different legal and administrative protection due to the ownership difference. Those FDI favoured arrangements create an unfair competition for the domestic firms as only the FIEs are entitled in having the special advantages. To gain the business benefits, the fake FDI inflow appears as the origin funding of FDI is actually China's overseas investment. In other words, it is Chinese funding that invests overseas and then flows back to China to be qualified for FDI favoured advantages (Salidjanova, 2011). That is why the unequal management created by the government also raises the costs in transaction and competition. The transaction costs in this category can be also reduced to a minimum level and to be ultimately removed once the dual system disappears in China.

After removing these two differences, **the transaction costs belonging to the third category are the most problematic, which is the treatment differentiation in practice (Birner and Wittmer, 2004; Huang, 2011; Luo, 2002; Park and Luo, 2001).** This distinction is because of different ownership although the firms should be treated equally according to the official documents of the WTO accession. For example, the financial funding from national banking system favours the SOEs, while both private firms and the FIEs cannot have the equal assistance. Upon the Chinese official documents, it is impossible to find the reasons connected with the problems in this category. However, the costs indeed exist in the business operation of foreign investment and domestic private investors. **This kind of transaction costs can thus be allocated to the formal and informal institutions**. Since the Chinese economy and society was under the control of the CCP for more than 60 years, the principles of Marxist have already been rooted into the social minds in this country. Though the reform took place more than thirty years ago, the foreign ownership and domestic private ownership appeared only in some specific regions for the 1980s and they have been lawfully recognised for about only 15 years. Understandably, nobody was willing to take the risks to support the growth of private sector as the private ownership was illegal for about half a century in China. Even if it seems that the private ownership is officially recognised and legally protected now, the character of Chinese government and the fact that the CCP completely controls the country determine the attitudes of government and the agencies related. Instead of an ultimate objective of the adoption of private

ownership as a path to achieve the economic growth, the development of private ownership must not be beyond the control and the accepting range of the CCP. The CCP has to avoid any threats on the SOEs coming from the development of private sector, by trying to control its expansion. Therefore, the bottom line is the CCP will never lose the benefits connected with its supreme power and authority in China. Due to the conflict between private ownership and the CCP, the transaction costs in the third category can be gradually reduced along with the continuous reforming efforts. However, it will never be abolished unless a 100% market oriented economy is set up and China gives up the Marxism entirely.

9.3.6 Summary

The author discusses the research findings of the previous three chapters. After reviewing the findings individually, the author examines the connection between the business constrains and the characteristics of the firms to study the influences of reforming the institutions in China. Based on the investigation of Chinese efforts in reducing business constraints respectively, including financing, business competition, corruption, legislation, rules and regulation, the author finds the principal explanation that might lead to the economic achievement in China - private ownership. All the reforms seem to be connected with this core element to change the institutions in China, and the institutions linked to private ownership may be also the reason of transaction cost increasing or decreasing. To sum up, the private ownership could be a key to reducing the transaction costs to achieve the efficiency of economic operation, while it might also become the difficulty that makes the transaction costs larger and preventing business growth in China.

Chapter 10 Conclusion

10.1 Research conclusion

In this thesis, the author has chosen the NIEs as the theoretical foundation to investigate the role of the business constraints in determining the firms' business performance in China. The findings show that institutional factors are as important as economic factors in regards to influencing business performance. The formal institutions include the financial constraints, competition constraints, legal constraints, rules and regulations constraints. Subject to the availability and limitation of research data, the informal institutions consider corruption, both as the general and specific constraint.

Based on the WBES data, this thesis examined the differences of the institutional constraints on the business performance, in terms of sales and investment. The author examined the existence of disparities among the firm categories with different ownership, consisting of foreign/domestic firms, and private/non-private firms. The author also assessed the disparities according to the firms with different size to see the role of firm size in determining the business performance, and the disparities that are closely connected with the nature of the Chinese business environment. In the context of the reforming outcomes and efforts in China, the author investigates both the effects of the general/specific constraints on the firms' sales and investment, to reveal the practical effects of the reforms.

Chapter 6 assesses the importance of the institutional and non-institutional constraints for the business in China, as well as assessing the importance of these constraints across different firm categories (firms with and without foreign ownership, private and the non private firms, and firms with different sizes). The results show that the firms are concerned with the institutional factors, such as corruption, tax and regulation, and financing. This chapter displays that the informal institutions such as corruption and the formal institutions such as tax regulation and legal system are of the same importance to the business operation of the different firm categories in China.

Upon the results of the Levene's test and the Error bar in Chapter 7, the proportional discrepancies between firm categories exhibit their different abilities when facing the constraints. The overall results also indicate that the disparities in the perception to the

constraints can be associated with the nature of the firms as well as the character of business environment. There are three factors that are significant at 95% directly because of the factor of foreign ownership, including financing as a general constraint, court enforceability as judicial constraint, and access to foreign bank as a finance constraint. The three constraints belong to the formal institutions, and no informal institutional constraint is significant. Moreover, when facing specific business constraints, the large variance displayed by the group of the foreign firms shows that the group is not homogenous. This would indicate that not all foreign firms perceive the business obstacles in the same way, as the other characters of these firms also play a role to deal with the business constraints, such as the factors of firm size and private ownership. In the category of the private/non private firms, two business constraints are statistically significant at 95%. These are financing as the general constraint and paper work as the specific financing constraint. Moreover, the private firms are less constrained by these two significant factors than the non private firms. For all other constraints, the private firm group and the non private firm group again show the larger variance. The way in which the responses are not homogenous demonstrates that there should be other factors that have an influence on the business operation. The author also notes the reforming efforts for the FIEs and the practical advantages of the large size SOEs are the elemental issues causing these differences.

In Chapter 8, the author does not only explore the business constraints statistically significant related to foreign ownership factor, but also examine the constraints significant in the private firm category. The regression analysis is based on the statistically significant variables in Chapter 7, as a general constraint, finance is the only one factor that is statistically significant to the both two categories. Among the individual business constraints, "court-enforceability" and "finance-access to foreign bank" are significantly related to the category of firms with and without foreign ownership, and "finance-paper work" is significant to the difference between private and non private firms. In the logistic regression analysis, the variable "finance" is not statistically significant to influence the change of business performance. In the categorical regression analysis, finance is only significant in influencing the sale growth in the previous three years, and its effect is negative. In the logistic regression analysis of "enforceability" and "access to foreign bank", the four models are insignificant. The variable "enforceability" is statistically significant to the change of sales in future three years, and the factor named "access to foreign bank" is statistically significant in leading the investment change in the future three years. In the categorical regression analysis, they are not significant to influence the business performance. In the logistic regression analysis, the variable of paper work is not significant in

all four models at the critical value of 95%. Compared to the critical value of 75%, the variable of paper work is statistically significant to affect the sale change in future three years. In the categorical regression analysis, this factor is not significant to influence the sale growth and investment growth at the given critical value of 95%. However, compared to the 75%, the variable of paper work is significant and negatively influences the sales growth in previous three years.

According to the analysis and discussion, the author concludes that the business constraints might not be statistically significant to influence the business performance, although the same constraints are statistically significant in relation to the different firm categories studied. Even if these constraints are significant, their influences are not consistent and continuous. In other words, the significant relations only exist either in previous three years or in future three years, either in sales growth or in investment growth. In addition, there are other factors that are significant which influence business performance although their influences are also inconsistent and discontinuous, such as firm age, sector, and firm size.

The author also notes that the influences of the institutional constraints reported by the hypotheses vary in different occasions according to the type of the firms studied, i.e. the foreign/domestic firms, the private/non private firms, small, medium and large firms. Therefore, these specific characters of the firms can determine the ability of these firms to access the information and business network. Consequently, the insider and outsider proposal is supported by this research. However, these significant relations between the institutions and the business performance cannot be kept consistent and continuous, and the informal institutions do not significantly influence the business performance in China. In short, the influences of institutions on the business performance are limited in China, in terms of sales and investment. These results imply that the comparison should look for other key factors rather than the firms' inherent nature.

At a macro level, the author emphasises the importance of taking into consideration the structure and characteristics of the Chinese economy in order to make a comprehensive conclusion about the capacity of the firms dealing with the institutional constraints in China, which includes existing Marxist influences and on-going reforms. Indeed, the SOEs enjoy the various advantages provided by the Communist government. On the contrary, for both the firms with foreign ownership and the private firms, the traditional aspects of and the present information

about the Chinese business environment report a number of disadvantages in competition. Seemingly, the reforms announced by China are meant to contribute to the growth of FDI inflows and domestic private investment. However, a lot of reforming efforts still stay on paper, instead of having an effect in practice. As a result, reform is still far less than an essential level to maintain a continuous growth for the foreign and the private firms. Instead, the reform has encouraged the business operations of a large inefficient sector of SOEs and has limited the expansion of the firms with non-state ownership, aiming to ultimately protect the socialist economy in China.

The author also concludes that, among the institutional constraints, the business performances of both the foreign firms and the private firms are most constrained by financing. In the financing reforms, there is an obvious conflict between these reforms as announced and their practical influences, and the largest share of national banking system credit funds flows to non-private firms in China, such as the SOEs. For the foreign and the private firms, the financial support from the national banks is limited and far less than their demand. Consequently, as the top constraint, financing prevents their business performance. Among the specific financing constraints, the institutions limit the supports to the foreign firms. The private firms also have to face more problems in getting domestic funds, and their efforts to access the funds abroad are blocked because of the existing institutional constraints in China.

Among business competition constraints, no factor is significant to influence the business performance of the foreign or private firms. For the constraint of DP, the behaviours of Chinese government and the financing support related toward the SOEs are the reasons behind the insignificant concerns of DP. In other words, because of the WTO accession agreement signed by China, the function of financing has taken the place of the other constraints, such as DP and RS, and financing issues also make the constraint of RS become less important in China. In term of VP, there are reforming efforts to establish the mechanism to protect patents and other intellectual property rights, and the social common reorganisation of patent protection has also been gradually set up in China. In other words, the reforms of formal institutions of patent protection successfully change the informal institutions related in China.

Although every firm is constrained by the judicial constraints, the foreign firms are more constrained than the domestic firms, and private firms are more judicially constrained than non-private firms. Thus, the FDI favourite policies and the judicial reforms connected in China are

partly failed to achieve their original objectives of setting up an efficient and effective judicial system for business operation. During the reforming time, the reform in the judicial system is successful before 2001 and is unsuccessful afterward. Without an independent and efficient judicial system, the obvious reason of the ineffective judicial reform is that many laws are not effectively enforced in Communist China. Basically, there are the unavoidable conflicts of the interest between enforcing the judicial independence and keeping the monopoly power of the Communist Party in the judicial system, particularly when facing the involvement of the SOEs in the judicial cases.

On the domestic side, the legislation reform leads to the changes of rules and regulations in China. On the international side, the WTO agreement brings the multilateral mechanism to China, and the bilateral agreements also support the institutional reforms in rules and regulations, including the bilateral investment treaty and the free trade agreement. The international cooperation removes the business obstacles and directs the reforms of rules and regulations, to build a favourite business environment. Thus, no firms choose the factor of rules and regulations as their top business constraint. However, the fact that the constraint of foreign exchange regulation is significant to the ownership difference indicates the success of reforming in Chinese foreign exchange policies.

The foreign firms are less constrained by corruption, and the private firms are more constrained. Moreover, the corruption constraints are not significant to the difference of firm ownership, either as a general constraint or as a specific constraint. The ownership is thus not the central issue connected with the constraints of corruption. As the informal institutions, the corruption becomes more serious in China and the firms are more constrained than before. Compared with the other developing countries, the corruption is not obviously worse in China. In addition, a growing market size and more business opportunities along with a rapid economic growth in China should be able to compensate the negative effects caused by corruptions. More importantly, the formal and informal institutions substitute each other; some significant variables can indicate the corruption closely associated with the other constraints in financing, in legislation, in business competition, and in rules and regulations.

The author also concludes that the firm’s characters can also partly explain these differences. For example, the firms with different sizes have different response to the institutional constraints, and the firm size can play an important role in shaping the business operation.

Although no general constraint is significant at 95%, three specific constraints are significantly related to the firm size factor, including the competition constraint of no duties, the financing constraints of access to non-bank equity and long term loan. The role of firm size is thus complex when facing business constraints and the general trends of this role are various too.

The author notes that, the results also indicate the potential advantage that the domestic firms have over the foreign firms due to the familiarity of domestic business environment. With regard to accessing the domestic network, the potential advantage is connected with the access to the network as part of the accumulative social capital that the domestic firms have been undertaken all along their existence in the Chinese business environment. The social network allows them pooling resources, sharing information, the generation of trust among the members and securing the predictable behaviours and assuring the outcome of some decision makers. On the other side, as the reforms were originally and officially conducted by government to attract the FDI inflows, the foreign firms also have their comparative advantages in financing, legislation, court, competition, corruption, and rules and regulations.

In addition, the author highlights that the large variance displayed by the group of the foreign firms indicates that this group is not homogenous, because not all foreign firms perceive the business obstacles in the same way and some foreign owners can have similar access to the network of Chinese business environment as the domestic firms. For instance, the capacity of the domestic partner in the joint venture is able to allow the foreign firms to access the domestic market network and reduce the transaction costs associated with market entry. Moreover, this author finds the factor of firm age is not as important as the other factors in affecting the business performance, such as the sector and the firm size. In other words, once entering the market, all the firms that have been investigated in this thesis can soon access to local network and be very quickly familiar with the Chinese business environment.

The author finds that the impact of corruption is apparently limited in affecting the business performance in China. The author assesses the importance of the interaction between the formal institutions and the informal institutions on the firms' business performance. That is, the direct effect of both types of institutional constraints on the business performance is on one hand, and the interaction between the formal institutional and informal institutional constraints is on the other hand. In other words, the substitute relation between the informal institutions and the formal institutions contributes and explains why the informal institutional constraints are not

statistically significant to influence the business performance. The interaction implied that the firms should be aware of the situations when and whether the use of informal rules damage or are replaced by formal rules in transaction and exchanges. The findings also demonstrated that the corruption through the formal institutions negatively influences the business performance in previous and in future. As a result, it is necessary for the firms operating in China develop higher awareness about the potential influences caused by the informal institutional constraints on the business operation and business performance, especially such as corruption.

The author furthermore indicates that all these activities are undertaken by Chinese government who should continue its reforming efforts to provide a more efficient business environment for transaction and exchange. As there is a serious conflict between the Communist principles and the marketing orient reforms, the government should introduce the civic participation in the process of increasing the level of freedom in economy and in society. Amongst the reforming policies, strengthening quality and effectiveness of rules of law and finance system should constitute one of the top priorities to improve the business performance, and the efforts to remove the root of causing corruption should also be undertaken. This involves developing strong and effective courts to strengthen social to reduce the transaction costs for exchanges. The reforms and the establishment should be associated with development of transparency in transaction operations, not only within the state apparatus and bureaucracy but also among public, private and civil society. All of these can focus on and alter the costs imposed by bad laws, poor enforcement, corruption, administrative discretion, and monopoly practices.

As a result, because of the problems of transparency and accountability in China, more efforts have to be arranged on developing an efficient mechanism to promote transparency across the transactions and exchanges. As the United States Trade Representative (2011: 3) notes, "essential work for China includes the need to reduce market access barriers, uniformly follow the fundamental principles of non-discrimination and transparency, fully embrace the rule of law, and fully institutionalize market mechanisms. Completing this work is critical to realizing the tremendous potential presented by China's WTO membership, including the breadth and depth of trade and investment". Correspondingly, there are several priority issues to build a more efficient institutional system in China, including intellectual property rights, industrial policies, trading rights and distribution services, agriculture, services, and transparency. The tasks ahead comprise not only a framework of laws and regulations, but also an effective enforcement of the laws and regulations in the Chinese business environment.

To create trust and reduce transactions costs, China should additionally focus on developing the positive aspects of the informal institutions, by improving and strengthening the cooperative behaviour based on trust derived from the existing social network, to improve the enforcement and effectiveness of the formal rules. Moreover, the public-private partnership is helpful to promote the existing informal mechanisms to ease the constraints associated with formal rules. Admitting the importance of the interaction between the formal and informal institutions, the reforming policies must stress on improving the adaptive efficiency of the informal rules after a change in the formal rules.

10.2 Limitation and difficulties in undertaking the research

In this thesis, the author has discussed several sensitive issues in a Communist country in order to identify and disclose the characteristics of the Chinese institutional framework. These issues consist of the nature of informal constraints that intervene in the Chinese economy and society in general, and in the business environment in particular. These are sensitive issues which contravene Communist Principles, whereby the investigation or data collection into such subjects may result in breaking the laws controlled by the Chinese Communist Party. Thus, it is expectable for the researcher to face practical obstacles due to the risk in the investigation of these informal institutions. The issue of corruption can be highlighted as one such difficult subject. In this regard, the examination of these topics in China does not only require confidence and trust, but the researcher must also be aware of the legal implications and punishments sanctioned by the Communist government. To overcome these problems, the author would have had to set up personal networks in order to gain access to the firms. This would have required an extensive amount of time and a considerable amount of financial resources. Time and financial resources were two major constraints faced in this research. As a result, despite the potential methodological problems associated with such methods, the author has to depend on the existing data of the WBES, which has been approved by the Chinese government. According to the responses received in China, it is obvious that managers were not comfortable dealing with the issues of corruption and other informal institutions.

In the comparison with other data sources, (Chapter 5: section 5.3.1), especially with the ES, **the WBES has several advantages to be chosen in this research**.

1. According to the official explanation of ES methodology, the firms with 100% government/state ownership are not eligible to participate in ES. However, in this

research, a number of hypotheses concentrate on the difference of the business constraints on the firms with or without government/state ownership. Without full state owned firms, the dataset itself is not sufficient for research exploration. By using the WBES, it becomes possible to provide a convinced investigation about the institutional constraints on the business performances of the private firms (without government ownership) and non-private firms (with government ownership).

2. The WBES "primarily collected perception data regarding constraints and some information on firm performance" (Aterido et al., 2009: 7). Perception is very important to investigate the institutions, especially in regards to institutional changes. This type of perception data is not widely available in the ES. This thesis's theoretical foundation is NIEs, and it is necessary to have a collection of perception data to clarify the relationship between formal and informal institutions and their connections. The WBES can mostly fulfil this request.
3. The ES concentrates on the firms' business performance data for the use of accountants when filling in financial statements such as business income, expenses, and profits. It is thus not appropriate for this study because a firm's profit might be influenced by the fluctuation of transfer prices, especially for firms with foreign ownership in a developing country. The WBES data includes both sales and investment data that can reflect the business operation at the firm level.
4. The ES covers a similar area as that of the WBES, and can be regarded as a simplified format of the WBES. The ES covers eight aspects of the business environment. This list includes infrastructure; access to finance; labour market; corruption & regulatory burden; court & crime; innovation & technology, and trade. The WBES carries information regarding to questions about nine areas: financing; infrastructure; policy instability; inflation; exchange rate; street crime; organised crime; taxes & regulation, and corruption. Compared with the ES, the WBES places an emphasis on questions about institutional constraints on the firms' performance, and questions related to the specific institutional constraint are also covered.
5. The WBES explores the following areas that are important in this thesis: "To provide feedback from enterprises on the state of the private sector; to measure the quality of governance and public services including the extent of corruption; to provide better information on constraints to private sector growth, from the enterprise perspective; to sensitize client governments to the importance of listening to firms and using this information to critically assess policies; to establish the basis for internationally

comparable indicators which can track changes in the business environment over time, thus allowing an assessment of the impact of market oriented reforms on private enterprises; to stimulate systematic public-private dialogue on business perceptions and the agenda for reform" (Batra et al., 2003: 3).

6. The WBES instrument is broad in its coverage and includes information on business environment attributes and firm level attributes including information on firm size; years of operation; sales; debt and growth performance; ownership nature and source of finance. There are also evaluations on issues such as corruption and governance; the regulatory regime; economic policy predictability; the nature of competition; public service delivery and government bureaucracy; the judicial system; banking system; financing and general constraints to business operation.
7. The WBES is the first survey that China agreed to take part in. Based on face-to-face interviews with managers and owners, the WBES is designed to generate comparative measurements in such areas as corruption, judiciary, lobbying, and the quality of the business environment, which can then be related to specific firm characteristics and firm performance. Response rates were generally high, with the exception of responses to questions on bribery. It uses a consistent methodology and parallel parameters.
8. The cost of conducting such a survey is beyond the ability of the author. The problems are linked mostly to the nature of this research and to some of the questions it raises, particularly with regard to politically related questions for the Chinese Communist Party such as the corruption of government officials and the evaluation of governmental behaviours. More seriously, it is likely for a researcher to face some offences in attempting to collect corruption data in China. The human, financial and political resources of the World Bank are difficult to match as the WBES provides panoply of different firms that embody different characteristics that are crucial to test the hypotheses of this research.

Using the WBES as the main source of research data in this thesis has several shortcomings. The limitations originally exist in the procedure of data collection and limit the data analysis and research discussion afterwards. The author has recognised the fact that some categories under the investigation have a low proportion of observations. This is another limitation of this study. Consequently, the findings of this research should be treated with caution due to the following limitations.

1. **The first limitation is** connected with the subjective issues in the whole research procedure, both in choosing research data and in the data analysis practice. The author has to compare the advantages and disadvantages among the available data source and then make a decision about which one is the most appropriate. Using SPSS to analyse data allows for several statistical tests which are available for the author to make judgements. Essentially, it is the researcher who selects the research data source, chooses a business model to carry out mathematical calculation, and then selects the appropriate statistical tests to make a conclusion. The process of statistical investigation and research conclusion are therefore totally subject to the person doing this research.
2. **The second limitation is because the WBES questionnaire data collection itself has the following shortcomings**.
    2.1. The WBES only contacts the managers or owners, excluding persons who are also connected with the business operation of FIEs from different aspects. This includes the government officials involved in the FDI policies' design or people taking part in FDI implementation. There are possibilities that such persons could also provide some important information.
    2.2. The WBES includes some survey questions about the performance in the previous three years. Other indicators in subjective areas might no longer be available either for memory lapse or as the particular information is only available at that time. Even if such data could be obtained, people might misclassify previous events and records, or recall details incorrectly. Additionally, it can also be said that recent experiences and events may bias recollection of earlier experiences, making inferences about trends or causation somewhat circular (Dex, 1991). Consequently, the information provided by select individuals might bring extra bias and negatively influence the quality of research.
    2.3. It is not easy for everyone to clarify those influences accurately, but the managers involved in the survey must be capable of summarising the business operation. They should be able to understand the survey questions correctly, and to express their ideas and minds clearly. During the procedure of the WBES data collection, translation is necessary. This involves translating questions into Chinese and translating subsequent responses into English. In this respect, it is often difficult or seemingly impossible to choose the most accurate vocabularies in the translation. This means that the translation process connected with data collection is dependent on the person who conducts the survey.

3. **The third limitation is linked to the shortcoming of the WBES data investigation.**
   3.1. Compared with the numerous numbers of enterprises in China, the sample size is so small that the results of data analysis and research conclusion could be debated. However, subject to the availability of survey data, especially in relation to the topic of corruption which remains a politically sensitive area in China, the WBES is still the best option to conduct this institutional research.
   3.2. The second problem is connected with the missing values. It is possible that some firms only answer some survey questions and did not provide answers to other questions. It could be argued that as the data for all survey questions might be incomplete, there could be debate in how best to apply the survey result and the subsequent analysis based on the survey to every firm involved the WBES. As the firms surveyed in the WBES did not answer the full survey questions, the questions they did not answer make the analysing result less convinced. It is not possible for these firms who did not answer particular questions to provide any further information to the WBES questions. As the research investigation can only depend on existing survey data, it is possible that the potential answers provided by these firms may demonstrate a different result of data analysis. It can be posed that potentially, the research conclusion should be treated with caution.
   3.3. The third problem relates to the consistency of the sampling size itself. In this thesis, the sampling size is not consistent throughout the whole research as the number of firms providing their survey answers are varied. The author has to address again that the inconsistent sampling size reduces the results of the data analysis and research conclusion. As a result, it is difficult for the scholar to apply the result of data analysis to every firm involved in the WBES. Accordingly, it is further difficult for the researcher to apply the research result to all firms in China. Thus it would be additionally problematic to make a convinced conclusion based on the research discussion. However, the inconsistent sample size does not mean that the opinions of the firms taking part in the WBES are worthless. The researcher can still analyse the mainstream of responses according to certain survey questions and then to demonstrate it to the business environment in China.

To sum up, subject to availability, the WBES is the most appropriate data set for research. As a well-accepted database, the WBES could contribute to the research to investigating the business constraints on the firms' performance in China. Choosing the WBES data, this study consists of

three different categories of firms which were all important to answer some research hypotheses, i.e. the firms with and without foreign ownership; private firms and non-private firms and the firms with different sizes and in different sectors. It would have been impossible for an individual researcher with limited resources to gather such comprehensive details and information on such politically and organisationally sensitive issues that would match the WBES. Moreover, the discussion of the WBES's shortcomings points out the direction of further studies in future. Larger samples and the availability of panel surveys would have increased the ability to draw country specific inference and track changes over time. Moreover, because perceptions are only imperfectly related to underlying physical and cost conditions, it would have been valuable in surveys to complement perceptual data with greater use of quantitative questions that evaluate constraints as much as possible, supporting cross-country comparisons and providing a check on perceptual responses.

10.3. Research implication

This study provides a suggested research agenda with a range of opportunities. This research makes an effort to set the ground for further studies on the interaction between the formal and informal institutions to understand their influences on the business performances. This research also provides some issues and calls for further investigation about the importance of institutional framework in China.

First, admitting the research limitation in the context of the availability of the survey data in China, a more widely based detailed empirical work is essential to cover the perception of different categories of the firms constrained by the institutions. In other words, a larger number of firms should be surveyed, including the firms with and without foreign ownership, private firms and non private firms, and the firms with different size. In addition, the questionnaire sample should also include the firms with other ownership types to see whether the mechanism of ownership difference affect the investors and managers to face the institutional constraints in the business transactions, such as the share of state ownership, with joint venture and without joint venture. If possible, future studies can also entail a sample of foreign firms with information on their operating duration in China, to investigate the competitive advantage between the first comers and the latecomers with regards to having more access to the information and networks of the local environment (Eden and Molot, 2002).

Second, the research reveals the firms' business performance in terms of sales and investment is indeed constrained by the institutions. The influences on the business performance are complicated and determined by either the formal or the informal institutional constraints. This explanation implies that further research is required to understand how the dynamic of the interactive form of institutions affect the business performance. If a more detailed survey database is available, further research can be undertaken on the means and mechanisms between the business performance and the interaction of the formal and informal institutional constraints. Future investigation can also focus on the informal institutions about how they can act as substitutes and as complements to the formal institutions. This work will entail the investigation of the properties of the informal constraints that promote the enforcement characteristics of the formal rules. Therefore, further work should focus on the promotion of specific institutions to understand how to improve the adaptive efficiency of the informal institutional constraints when the formal institutions are altered.

Upon a different philosophical foundation, future research can also choose a qualitative approach to investigate a more interactive process of how the firms' business performance is constrained by the institutions. For example, further study can choose interviews within the business community to understand how the different individuals and agents actually reason and choose, individually and in collective settings. However, it needs to overcome the difficulties in collecting the data of the informal institutions, particularly about the corruption in China. Alternatively, a more empirical and accurate study can be based on both quantitative and qualitative methods to improve the understanding of social networks and their participants. This approach is very useful in understanding the change from one institutional setting to another and how the change can take place. This can also improve the understanding about how organisations interact with each other and how they use informal connections to gather information. In addition, this analysis is helpful in mapping the relationship between actors and organisations indicating the ways they are connected through various social familiarities, in the context of understanding the mechanisms that enter in the development of adaptive efficiency of informal rules after altering the formal institutions. Likewise, further studies can also be undertaken on the role of some institutions in explaining the behaviour of other economic agents constrained by some specific institutions. That is to say, it is possible to explore the relations between some economic agents and the particular institutional constraints. Obviously, it again addresses the importance and the value of conducting a more in depth business survey. More

essentially, this more detailed survey should be independently carried out and be out of the control of the Chinese Communist government.

Four, this research suggests that the severity of the institutional constraints is significantly related to the size of the firms, and the influences of the firm size factor are very complicated in China. The future work can target the relation between the institutional constraints and the firm size factor to clarify the reasons resulting in the complex effects caused by the firm size. The researches between the institutions and firm size can also focus on each particular constraint to find about how they affect the firms of different sizes. These investigations can therefore be useful to reform the existing policies and to improve the behaviours of the government in China.

Five, further studies can be undertaken at the different level. On one side, a cross-country investigation can focus the important aspects regionally or internationally to explain the national difference of the institutions and the business constraints. On the other side, an organisational study can concentrate on an individual business organisation to discover the organisational influences caused by the informal and formal institutions, in order to find out a more efficient business form and a more effective business reaction when facing the institutional constraints.

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